THE

Lumleian Lectures

ON

THE DIGESTIVE FERMENTS, AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

Delivered before the Royal College of Physicians,

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LECTURE II.—PART I.

PEPSIN AND TRYPSIN—DIGESTION OF PROTEIDS.

VARIOUS kinds of albuminous or proteid substances are used by mankind as food. The most important of these are muscular flesh, the casein of milk, and egg-albumen from the animal kingdom; and gluten, albumen, and legumin from the vegetable kingdom.

Proteids are attacked by the digestive ferments at two points in the alimentary canal, by pepsin in the stomach, and by trypsin in the small intestine. Between these two acts of digestion there is a complete break in the duodenum, owing to the abrupt change of reaction from acid to alkaline which occurs at that point.

Gastric digestion is, in all creatures, an essentially acid digestion; but the most varied opinions have been entertained as to the nature of the acid. It has been supposed in turn to be hydrochloric acid, lactic acid, acid phosphate of lime, butyric, and even acetic acid. Much of this confusion has arisen from not distinguishing between the acid of pure gastric juice as secreted into an empty stomach, and the acid of the gastric contents during the digestion of a meal. A good deal of light has been thrown on this subject by the recent researches of C. Richet.[1] This observer found himself in exceptionally advantageous circumstances for the study of the gastric juice. He had under observation a young man on whom Verneuil had successfully performed the operation of gastrotomy for the relief of impermeable stricture of the œsophagus, the result of swallowing inadvertently a quantity of caustic potash. The complete occlusion of the œsophagus enabled Richet to obtain and examine the gastric juice in a pure state, uncontaminated with saliva. All food had to be administered through the fistulous opening left after recovery, and the observer could at any moment—as in the famous case of Alexis St. Martin—withdraw portions of the gastric contents for examination. Richet also took advantage of the new method of separating the various organic and mineral acids from one another made public by Berthelot in 1872.[2]

Berthelot had found that if you shook up an aqueous solution of any acid with ether, and then allowed the two fluids to separate, that a part of the acid passed into the ether, and that the remainder clung to the water, and that the ratio between these two parts was a constant quantity. He called this ratio the *coefficient of partage*, and found that its value was a fixed characteristic for each particular acid. Solutions of the mineral acids were found to yield nothing, or almost nothing, to ether when agitated with it; but organic acids were found to pass into the ether in considerable, though very variable, quantities—the proportion varying in a constant ratio according to the nature of the acid.

Testing pure gastric juice, uncontaminated with food or saliva, by this method, Richet found that almost all the acid was retained by the water, and that only a small proportion—about one in twenty-two—passed into the ether. This showed that the acid of pure gastric juice was almost entirely a mineral acid, with only a minute admixture of organic acid. The organic acid (tested by the same method) exhibited a coefficient of partage closely corresponding with that of sarco-lactic acid. The nature of the mineral acid was determined by a method similar to that employed by C. Schmidt, and yielded the same result—namely, undoubted evidence that the mineral acid of pure gastric juice was hydrochloric acid. But Richet found that this mineral acid did not behave in the presence of salts of the organic acids quite in the same way as free hydrochloric acid does. The observations of Berthelot had shown that when free hydrochloric acid is added to a solution of acetate of soda, or other similar organic salt, the mineral acid attaches the base entirely to itself, and throws the whole of the organic acid free into solution—so that the mixture when tested by the method of coefficient of partage behaves exactly like an unmixed solution of the organic acid. When pure gastric juice was put to this test it was found that, although it liberated the organic acid largely, it did not do so to the same extent, by a good deal, as if the mineral acid contained in it had been entirely free. It behaved, rather, as hydrochloric acid does when united with a feeble organic base, such as leucin or peptone—and, on the ground of what appear to be very careful experiments, Richet came to the conclusion that this feeble base was probably leucin, derived from the gastric mucus, and that the acid of pure uncontaminated gastric juice was hydrochloric acid in loose combination with leucin.

Richet next proceeded to examine the free acid actually existing in the stomach during the digestion of a meal in his patient with gastric fistula. He found, as might have been expected, that this differed from the acid of pure unmixed gastric juice—in this respect, namely, that it contained a very much larger proportion of organic acids, in comparison with the mineral acid, than pure gastric juice. It was evident that the mineral acid had to a large extent seized upon the bases of the acetates, malates, lactates, butyrates, and other organic salts always present in the food, and had set free their organic acids. The real work of digestion then, so far as the acid constituent is concerned therein, is largely performed by various organic acids thus set free from the articles of food which are undergoing digestion.

Richet found that the acidity of the contents of the stomach during digestion, although it varied through considerable limits, had a marked tendency to maintain the normal average. If acid or alkali was added to the digesting mass the mean was presently restored automatically—the stomach in the former case ceasing to secrete acid, and in the latter case secreting an increasing quantity of acid.

The Effect of Gastric Juice on the Salivary and Pancreatic Ferments.

The observations of Berthelot on the power of a mineral acid to set free the acids of organic salts and to take their place with the bases—and the further observations of Richet, showing that the acids actually free in the gastric contents during digestion were organic acids, have led to the re-examination of a point of some importance—namely, as to whether the salivary, and more especially the pancreatic ferments, were or were not destroyed by the acid contents of the stomach. The matter has a practical interest in this way. If the gastric acid destroys these ferments it is evidently useless to administer pancreatic preparations by the mouth during digestion, because they would be rendered inert by the acid contents of the stomach. On the other hand, if they are not destroyed in passing through the stomach, but merely lie dormant and recover their activity in the alkaline medium of the small intestine, then we can administer pancreatic preparations during digestion with every prospect of their passing uninjured through the pylorus and proving useful in assisting digestion in the small intestine.

A series of experiments bearing on this question were submitted by T. Defresne to the Académie de Médecine and the Académie des Sciences towards the close of last year, and have attracted some attention. On the ground of these experiments Defresne arrived at the following conclusions—namely, that saliva continued its action on starch in the stomach without interruption—that the pancreatic ferments in like manner preserved their activity in the presence of the gastric acid—that the acids of the chyme, being organic acids, did not really destroy these ferments, but merely reduced them to a state of temporary inertness; so that when the acidity of the chyme was neutralised in the duodenum, they recovered their powers and exhibited undiminished activity both on starch and proteids.

As the question had a direct bearing on the medicinal administration of pancreatic preparations, and indirectly on the administration of malt-diastase and malt-extract, I thought it desirable to repeat some of Defresne's experiments and to

[1] Du Suc Gastrique, by Ch. Richet. Paris, 1878.
[2] Ann. de Chimie et de Physique, 4e Série, t. xxvi., p. 396.

put the question raised by these experiments to the test in other ways.

One of Defresne's (apparently) most convincing experiments was the following, which I give nearly in the words of the abstract of the paper published in the Proceedings of the Académie de Médecine for November 4th, 1879. When twenty grammes of dilute hydrochloric acid, having twice the acidity of the normal chyme, are mixed with twenty grammes of egg-albumen—what follows? The acidity of the medium is no longer due to free hydrochloric acid, but to the lactic and phosphoric acids of the white of egg which have been set free. In presence of these acids pancreatine may be digested for two hours in the warm chamber with impunity. And if, at the end of this period, the acidity of the mixture be neutralised, digestion is accelerated, and the pancreatine peptonises thirty-eight times its weight of albumen.

I repeated this experiment in the following manner: forty grammes of chopped boiled white of egg were mixed with forty cubic centimetres of dilute hydrochloric acid of the strength of four per thousand. This mixture was subjected to a preliminary digestion of two hours in the warm chamber at 40° C. The object of this preliminary digestion was to allow the hydrochloric acid a sufficient time to seize on the bases, and to set free the organic acids of the white of egg. At the end of this time five cubic centimetres of an active extract of pancreas were added to the mixture. A second experiment was arranged in exactly the same way, except that filtered saliva was substituted for extract of pancreas. The mixtures were kept in the warm chamber for a further period of one hour, and were then filtered and carefully neutralised. On testing the neutralised filtrates, I obtained approximately the same results as Defresne. The diastatic and proteolytic ferments of the pancreatic extract were found active, but not so active by a good deal as if the extract had been diluted to the same extent with simple water. In the second experiment with the filtered saliva the ptyalin had preserved its activity quite unimpaired.

These experiments, however, involve a fallacy which vitiates the deductions intended to be drawn from them. White of egg has a highly alkaline reaction, and although the acid used in the experiment possessed double the strength of the normal gastric juice, it was found that the mixtures, at the end of the two hours' preliminary digestion, had only a comparatively feeble acidity—in fact, only one-seventh of the normal acidity of the gastric contents. It has long been known that the salivary and pancreatic ferments are able to resist a feeble acidity, but the question really at issue is, Can these ferments resist the average acidity of the contents of the stomach, when, moreover, this acidity is rendered still more destructive to them by the presence of pepsin?

I tested the question in this way. A distinction is drawn, and rightly, between the acidity due to free hydrochloric acid, and a similar degree of acidity due to an organic acid. Now, lactic acid is a typical organic acid, and it is also an acid which is often, if not always, present in the contents of the stomach during digestion. I prepared a solution of lactic acid corresponding in saturating power to the normal gastric acid (2 per 1000 HCl.). To fifty cubic centimetres of this dilute lactic acid I added five cubic centimetres of a solution of pepsin and five cubic centimetres of an active extract of pancreas. I prepared a second similar experiment, but substituted filtered saliva for pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period the solutions were exactly neutralised and tested. They were both found to be absolutely inert. Not a vestige of amylolytic nor proteolytic power had escaped destruction.

I had an opportunity of trying the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimetres of clear acid solution were obtained. The period of digestion was three hours after breakfast. One-half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture was placed in the warm chamber for one hour. At the end of this time it was exactly neutralised, and divided into two equal portions. One portion was tested with a drop of starch-mucilage, and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk rendered slightly alkaline with bicarbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

I may mention that in the above experiments I used milk as the test of proteolytic activity. I had become thoroughly familiar with the behaviour of milk with pancreatic preparations during a long course of observations, and was therefore able to detect the slightest signs of pancreatic action.

With this evidence before me, I am unable to accept the conclusions of Defresne and others in Paris who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion; and who recommend the administration by the mouth of pancreatic preparations during the period of chymification. I will in my next lecture point out the time and the method in which these preparations may, I believe, be administered by the mouth with sure prospect of success.

Digestive Proteolysis.

The changes undergone by albuminoid substances in digestion are still very imperfectly understood. It is, however, known that the chief end-product of the transformation is peptone. It is also known that between any native proteid—egg-albumen, muscle-fibrine, casein, or legumin—and the end-product peptone there are intermediate grades and bye-products, which have hitherto proved difficult to define and isolate. The constitution of the proteid molecule is still unknown to chemists. That it is a highly-complex aggregation is certain; and it can scarcely be doubted that the way to a better knowledge of its constitution lies in a persevering study of the action on it of the digestive ferments. It has been already seen that in the case of starch the action of diastase furnished the key to the constitution of the starch molecule; and, similarly, it is not unreasonable to expect that the mystery of the proteid molecule will be finally solved by a study of the action on it of pepsin and trypsin. Attention has hitherto been too exclusively directed to peptic digestion, which is complicated by the interaction of an acid. Pancreatic digestion is, in this respect, a simpler process, inasmuch as it requires the interference neither of an acid nor an alkali, but is a reaction, pure and simple, between the ferment and the proteid. This, however, is a question of the future.

Characters of Peptones.

The end-product peptone has been fairly isolated and its characteristics defined. If the filtered product of a pancreatic digestion of egg-albumen be evaporated to dryness in a watch-glass at a temperature of 104° Fahr. (40° C.), there remains a glassy straw-coloured residue resembling dried gum. With the point of a penknife this can be chipped off in shining scales, which may be easily reduced to a fine whitish powder—this is nearly pure peptone. This substance is extremely soluble in water: and its solutions even when highly concentrated by evaporation betray no jellying, and no viscosity, but continue diffluent almost to the moment of desiccation—only just before drying up do they assume a slightly syrupy consistence. When the latter point is approached the solution deposits beautiful white crystalline sheaves of tyrosin and spheres of leucin. From the constancy with which these crystalline bodies make their appearance in pancreatic digestion it may be inferred that they constitute an essential portion of the final products of the transformation.

The reactions of peptone are mostly of a negative character. Its solutions give no precipitation with nitric acid, nor with boiling, nor with ferrocyanide of potassium and acetic acid. The behaviour of peptone with alcohol is peculiar. When a strong peptone solution is dropped into absolute alcohol, the peptone is precipitated as a white sediment, but it is not truly coagulated into an insoluble modification, as all the other proteids are, for when the alcohol is removed the deposit is found to have preserved its solubility in water—even after prolonged contact with the alcohol. Solutions of peptone are precipitated by those metallic salts which throw down other proteids, also by tannin when the solutions are neutral. When the solutions are rendered alkaline, the cupro-potassic test (Fehling's solution) added in very small quantity produces a rose-red colouration, whereas other proteids produce a violet tint. Physiologically, by far the most important reactions of peptone are its extreme

solubility in water and its diffusibility through organic membranes. With regard to the latter point, contradictory statements have been made by different investigators. Otto Funke rated the diffusibility of peptone through the membrane of the small intestine higher than that of common salt. On the other hand, V. Wittich concluded that peptones did not pass through parchment paper more rapidly than unaltered albumen. My own observations support the view that peptone is incomparably more diffusible through parchment paper than the native proteids. In the case of milk, the effect of digestion is very marked in regard to its behaviour in the dialyser. When milk was dialysed for forty-eight hours into twice its volume of water, not a trace of proteid matter could be detected in the diffusate; but when milk had been previously digested for a couple of hours with pancreatic extract, an abundant reaction with tannin and Fehling's solution was obtained after dialysing it for eight hours.

My results with egg-albumen were equally striking. I prepared a solution by agitating white of egg with nine times its bulk of water, and straining the product through muslin. When this solution was dialysed into twice its volume of water for thirty-two hours it yielded absolutely no reaction with tannin nor with the cupro-potassic test. But when the same solution was previously digested, either with pepsin and acid, or with pancreatic extract, and then dialysed, it gave in five hours a slight but distinct reaction, both with tannin and with Fehling's solution, and in sixteen hours a most abundant reaction.

The theoretical views held by physiologists in regard to the intimate nature of the transformation undergone by proteids in the presence of pepsin and trypsin are still unsettled, but recent opinions converge towards the idea that the process is, in the main, one of progressive deduplication with hydration, similar in type to the transformation of starch by diastase. This view receives a positive support from the recent analyses of Henninger. By operating on highly purified albumen, fibrin, and casein, Henninger[3] succeeded in obtaining peptones in a state of great purity. An analysis of peptones so obtained indicated that they contained less carbon and nitrogen, and proportionally more hydrogen, than their original proteids. The differences were, it is true, small, but they pointed distinctly in the direction of the conclusion that there was a fixation of the elements of water by the proteid in the course of its transformation into peptone.

Henninger also believes that he has succeeded in reversing the process, and in reproducing an albuminous substance from peptone by operating on it with dehydrating agencies. He found that when fibrin-peptone was heated with anhydrous acetic acid at 80° C., or was maintained for an hour at the temperature of 160° to 180° C., it yielded a body which agreed closely in its reactions with syntonin.

The intermediate products which are generated in the course of proteid digestion, and stand between the original proteid and the end-product peptone, are very imperfectly understood. The laborious researches of Meissner and Kühne have shown that several such intermediate bodies are produced, but these have not yet been adequately isolated and defined.

[3] A. Henninger, De la Nature et du Rôle Physiologique des Peptones. Paris, 1878.

CORONERSHIP FOR WEST KENT.—A petition has been presented to the Court at the West Kent Quarter Sessions from the Dartford Local Board of Health, the document also being signed by the vicar and churchwardens of Dartford, praying that the West Kent Commissioner's district should be divided into two districts, to be called the Greenwich and the Dartford district, and that a coroner should be appointed for each district. They suggest that the Greenwich district should consist of the following parishes:—Beckenham, Bromley, Cudham, Charlton, Chislehurst, Chelsfield, Downe, Farnborough, Greenwich, Hayes, Halstead, Keston, Kidbrooke, Lee, Lewisham, Mottingham, St. Nicholas (Deptford), St. Paul, Deptford (that portion in Kent), Plumstead, Woolwich, and West Wickham. The Dartford district, they recommend, should include the parishes of Bexley, Crayford, Darenth, Dartford, Eltham, Erith, Eynsford, Farningham, Fawkham, Footscray, Hartley, Horton Kirby, Knockholt, Longfield, St. Mary Cray, St. Paul's Cray, Southfleet, Stone, Sutton-at-Hone, Swanscombe, East Wickham, and Wilmington.

Lettsomian Lectures
ON
THE TREATMENT OF STRICTURE OF THE URETHRA, ENLARGED PROSTATE, AND STONE IN THE BLADDER,
WITH SPECIAL REFERENCE TO RECENT PROGRESS.

Delivered at the Medical Society of London, February, 1880.

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LECTURE III.—PART I.

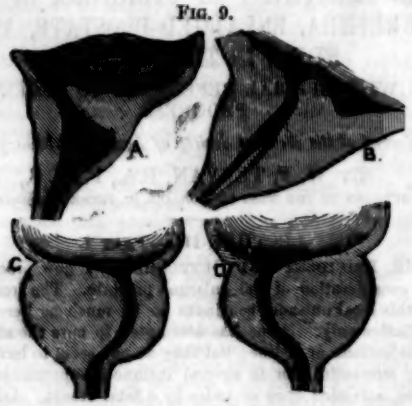
MR. PRESIDENT AND GENTLEMEN,—I now proceed to the consideration of the enlarged prostate. The treatment of this local nuisance continues to be much as heretofore, palliative only. Heine has attempted to cure the affection by injections of iodine; but they do not seem to have been very successful, for in several instances suppuration took place, attended once or twice by a fatal result. Atlee has recorded cases in which he obtained marked diminution in the size of the enlarged organ by the administration of ergot of rye. I have myself given the drug in large doses for months together, but I did not observe any appreciable reduction in the bulk of the gland. In France, compression, dilatation, electricity, incision and excision, have all been tried; but the only effectual measure would seem to be the excision of the obnoxious portion, as invented and practised by Mercier, whose name will for ever be associated with this subject, for his investigations into the pathology and treatment of the complaint were so exhaustive, that he left but little to be done by those who followed him. Although Guthrie had recognised "the bar at the neck of the bladder," Mercier established the very great pathological differences between the "valvule musculaire" and the "valvule prostatique." His coudée and bicoudée instruments have obtained a world-wide reputation, and his elbowed catheter is known all over his own country as "the old man's catheter." To Velpeau belongs the merit of having established the analogy which exists between fibrous tumours of the uterus and those of which prostatic outgrowths are made up. Professor Ellis showed that the prostate was not a gland, but a body composed of unstriped muscular tissue. The pathology and treatment of the enlarged prostate, as usually understood in this country, might be expressed by a knob jutting up at the entrance to the bladder, requiring a catheter shaped like a Saracen's scimitar to pass over it. A little reflection will show how imperfect and rudimentary such a conception must be. Although it is perfectly true that the median portion lying behind the verumontanum (sus-montale) is the part usually enlarged, yet it is by no means uncommon to meet with cases where either one or other of the lateral lobes is hypertrophied, thereby causing great deviation in the course of the urethra, so that the passage of a metal catheter is an impossibility.

The following diagrams[1] illustrate the four separate and distinct conditions which may be found interfering with micturition. The first one (A, Fig. 9) represents "the bar at the neck of the bladder" of Guthrie, or "valvule musculaire" of Mercier, which consists of a transverse fold of mucous membrane, enclosing hypertrophied muscular fibres at the rectal aspect of the meatus internus, and differs greatly from "the valvule prostatique," B, or enlarged third lobe of the prostate, as it is commonly called, although in reality there are but two lobes. Either lateral lobe may alone be enlarged, as seen at C, where the right one may be observed greatly increased in size, pressing the urethra into a crescentic-shaped canal, and at D the left one is seen to be similarly affected, deflecting the urethra to the opposite side, rendering it impossible to introduce the ordinary metal prostatic catheter. Anyone who has had much experience in introducing silver instruments in cases of enlarged prostate

[1] Figures A and B are taken from Mercier and Phillips.

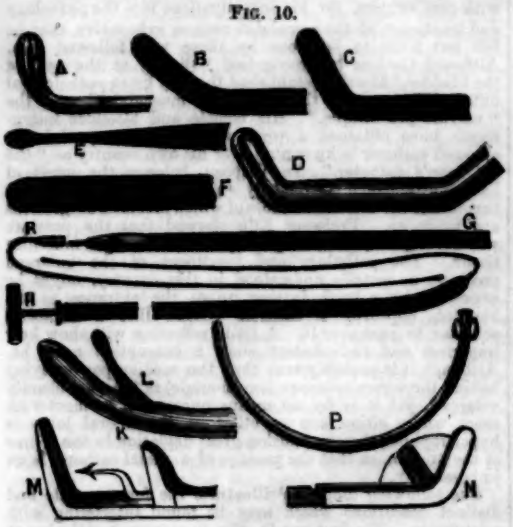
must have occasionally noticed, that in endeavouring to pass a catheter it was arrested at a certain spot, and deflected to the right or the left, so that the handle of the instrument made a quarter turn to the right or the left in the surgeon's

FIG. 9.



hand. The only instrument which can effect a diagnosis between a muscular and prostatic valve is the short-beaked sound of Mercier (see A, Fig. 10.) Its beak is the shortest ever made, and is set almost at right angles to the shaft. It might at first sight be supposed that it was difficult to introduce, but this is not so. There is no instrument so easy to pass as a short-beaked lithotrite. I have never seen a case where one or other failed to slip in, the difference of an eighth of an inch in the beak determining success or failure. Rectal examination may elucidate whether there

FIG. 10.



be general or partial enlargement of the prostate, but it will fail to discover any alteration in the central median portion behind the verumontanum. The most important object in connexion with the enlarged prostate is to choose for a patient that catheter which he can introduce with the greatest ease and the least annoyance. Till within the last few years the English gum-elastic catheter was that which was usually placed in the patient's hands. Its end bad, however, to be very curved, and then set; and as it was only good for one introduction, without requiring to be again reset, gentlemen obliged to use catheters usually kept a mahogany case containing seven of them, one for each day in the week, set in grooves, and ready for use. Now, all this cumbersome appliance is done away with, and patients carry in their walking sticks, or umbrella sticks, but one catheter.

Mercier was led by his investigations to invent the coudée catheter (C, Fig. 10), which goes by the name of "the old man's catheter" in France. Such a success was it, that six weeks after its introduction Leroy d'Etiolles brought out his coudée catheter (B, Fig. 10), which was a bad imitation of Mercier's, from whose it differed only in having its beak set at a more obtuse angle to the shaft, so that it was very liable to impinge against the prostatic obstruction instead of riding over it. Mercier's catheters are made with beaks of varying lengths; the illustraton represents a long one. As a rule the shorter the beak the less will it annoy the patient. Of all catheters for prostatic use the coudée is, perhaps, the one most generally applicable. I myself prefer the olivary catheter (E, Fig. 10), but in order that it may pass easily it must have a long slender neck and well developed olive, otherwise it will impinge against the prostate, cause bleeding, and prove worse than useless. If, however, it be made as I have pointed out, its olive will usually mount the prostate, and glide into the bladder. If the catheter will not pass it can usually be made to do so by bending the last half inch at right angles to the shaft, so as to make a coudée beak to it. Provided an olivary catheter suits the patient, it is by far the best one for him to use, I think, as it can be introduced very quickly and without annoyance. The indiarubber cylindrical catheter (F, Fig. 10) is that preferred by Hutchinson, Socin, and Van Buren. There is no doubt that it is the one which can be introduced with the least annoyance to the patient, but this great advantage is counterbalanced by the fact that it cannot be passed quickly, which is a great objection; for if a patient cannot introduce his instrument rapidly he becomes nervous, fidgety, and fails. In a considerable number of cases the india-rubber instrument cannot be passed; it can often be made more manageable by inserting a close-fitting bougie-stylet for about two-thirds of its length, leaving the last three inches empty, so that the very limpness of its extremity may enable it to be passed over the obstruction. If a surgeon be called in to a case of retention from enlarged prostate, he usually tries to pass the silver "prostatic catheter," but I consider it ought only be taken as a last resource; in inexperienced hands it is, to use Keyes' expression, "a murderous weapon." For the relief of prostatic retention, by whatever pathological alteration it may be caused, I know of no instrument equal to the "sonde à vis portant un conducteur" of Dr. Charles Phillips, the author of the well-known work "Maladies des Voies Urinaires." The filiform bougie (R, Fig. 10) can be wriggled over an enlarged third lobe, or round a lateral one into the bladder; the catheter, G, is then screwed on to it, and made to follow it into the bladder. The eye of the catheter is placed near the ferrule, which is objectionable, for as the instrument may be bent at right angles when traversing the subpubic region, it is liable to crack at its weaker part, which is at the eye. I have therefore had the eye made in the brass ferrule, as seen in the illustration. By this little change there is no longer any weak spot at which it may crack. There are other catheters for relieving retention from enlarged prostate. H, Fig. 10, represents an over-sliding catheter introduced by Maisonneuve. It consists of a fine olivary bougie, to which is attached a cord twelve inches long fixed to a crossbar; a catheter, open at both ends, is passed over the bougie and string till it meets the crossbar. The surgeon introduces the bougie into the bladder, and, holding the crossbar in the left hand, slides the catheter over the bougie, which is then withdrawn. Another catheter is that of Récamier (P, Fig. 10), comprising half a circle. It hugs the roof of the urethra during the entire time it is being introduced, so that it avoids the prostatic third lobe and false passage, which latter is nearly always in these cases found in the floor of the urethra in front of the obstruction. In certain cases, where there is not only a third enlarged lobe, but the general body of the prostate is considerably augmented as well, thereby causing great elongation of the prostatic urethra, Mercier's bicoudée catheter (D, Fig. 10), will be found most useful. There are also the American vertebrated catheters of Gross and Squire.

One of the most troublesome complications is the presence of a false passage, which is always, I may say, situated in the floor of the urethra. There are two different methods of overcoming the difficulty. One is to pass a medium-sized metal catheter, as suggested by Mercier, and leave it in the false passage; a small elastic catheter is then to be introduced by the side of the metal one, and as the false channel is occupied by it the elastic instrument will glide into the bladder. For effectually meeting the difficulty caused by a

false passage, Mercier invented what he called his "invaginated catheter." It consists of a full-sized metal catheter very slightly curved (see E, Fig. 10), containing an elastic catheter, L, which is turned out by means of an inclined plane, so that when the silver one has gone into the false route, the surgeon can shoot out the elastic catheter.

If no instrument can be introduced, what operation should be performed? I consider tapping the bladder through the rectum to be an objectionable procedure, for it necessitates the patient's confinement to bed with a tube up his bowel, which becomes covered with fæcal matter, and is very likely to slip out: the opening is liable to remain as a fistula, and cannot be utilised. The relief afforded by the operation is only temporary, and after the removal of the tube the patient is left in much the same condition as he was before the operation. Aspiration of the bladder above the pubes affords but transient relief. Far better is it to tap the bladder above the pubes with a full-sized trocar and cannula, through which an elastic catheter can be passed into the bladder and retained there.

In connexion with the enlarged prostate cysto-prostatitis naturally obtrudes itself. It is very common to observe a certain amount of chronic inflammation in men who are obliged to use a catheter, which might often, I think, have been avoided if the urethra had been very gradually accustomed to the introduction of the instrument. If a man begins to pass a catheter twice a day from the first, he is very likely to irritate and inflame the urethra; but if, on the other hand, he merely introduce the instrument every other day for the first fortnight, once a day for the second, and twice daily afterwards, the urethra will have time to become accustomed to the frequent intrusion. When there is much deposit of muco-pus the bladder ought to be washed out daily with warm water, for which purpose I know of no apparatus so good as the American one of Keyes. Some cases of chronic cysto-prostatitis resist every means of cure, and are in this country usually left to be broken up by pain and want of rest. In America cystotomy has been established as an operation for such patients, by Willard Parker, Emmett, Gouley, Mastin, &c., the object being to treat the bladder as a suppurating sac, and give it physiological rest by allowing the urine to dribble away as fast as it trickles in. I think that future experience will prove that the incisions of lateral lithotomy are unnecessarily severe for the purpose, which can be equally attained by external urethrotomy, with which operation I have contented myself, and allowed all the urine to run away through a soft tube. It is wonderful to see the immediate relief which such an operation affords; a patient who has perhaps been tormented for years, and has not known a good night's rest, sleeps soundly the night of the operation, having lost all his pain.

I will now for a moment glance at those patients who pass their catheters comfortably twice a day, and have nothing to complain of. Under favourable circumstances they may go on for years, and all is well; but there comes a time in the history of every such patient, if he only live long enough, when the hand loses its cunning or the sight becomes dim, and the catheter is no longer passed with the same skill and ease as of old, some hitch occurs, and the man is beaten. The aid of the nearest doctor is sought, but he very likely fails in so complicated a case. The hospital surgeon is then called in, who probably after some difficulty succeeds. The result of all the combined manœuvres too often is that cystitis or hæmorrhage carries off the patient. Then, again, there is another set of cases. A man goes on well for some time, but a period arrives when he finds that he has not long emptied his bladder with the catheter before he is again troubled by an urgent call to micturate, and has to use his instrument; the intervals of respite become less and less distant, and the unfortunate man at last finds that half an hour after he has emptied his bladder he is tormented with an urgent desire to urinate, which destroys his night's rest and makes life a burden to him. Now is the time for surgery to interfere and to try and save the unhappy patient from the doom which so surely awaits him. I consider that whenever auto-catheterism is becoming increasingly difficult or frequent, the time for action has arrived, and must not be delayed. Far better would it be if the operation were not postponed till the patient's strength be undermined, but that action were taken on the earliest indication of coming trouble. There are three different operations open for selection. 1. There is the supra-pubic puncture for the purpose of establishing a new route, allowing the urethra to fall into disuse. 2. Puncturing the urethra at the apex of the prostate, thereby giving the patient a second meatus externus. 3. The excision of the obstruction as invented and practised by Mercier. Of all these operations the last is the only one that removes the cause of the trouble; hence it is theoretically perfect in its conception. Hundreds of men now alive to whom Mercier has restored the faculty of free and natural micturition, prove that the operation is as good in execution as it is in theory. The alleged danger of hæmorrhage has not been sustained by experience, and sinks into insignificance when compared with the great results achieved. There are other French surgeons besides Mercier who have tried the operation, and reported most favourably of it; curiously enough, I believe, it has never been performed in this country. The instruments for incising the muscular valve and excising the prostatic one are respectively represented at N and M, Fig. 10. Supra-pubic puncture has its advantages and disadvantages; it is the only one of the three operations eligible in the event of the surgeon not being able to pass any instrument along the urethra into the bladder; its special risk is urinary infiltration causing peritonitis. The operation which I have been in the habit of performing is that of opening the membranous urethra just in front of the prostate, in order that the patient may have direct and easy access to his bladder. It might at first sight appear that in these cases catheterism from the perineum would offer no advantage over that manipulation performed in the ordinary way down the penis, but this is not so. What is it that sometimes renders catheterism difficult, and at times impossible? The trouble is not directly caused by the third lobe, but the general enlargement of the prostate converting the sub-pubic curve into an angle which, if it be very "accentuated," as the French call it, may render catheterism impossible. In the normal urethra the course of its deeper portion is a gentle curve; but when the prostate is much enlarged it is greatly elongated and carried upwards and forwards, forming a sharp angle with the membranous part, which is fixed between the layers of the triangular ligament. In such cases, if an opening be made into the membranous urethra and a catheter introduced, it will glide into the bladder with the greatest ease, *as it has only to mount an inclined plane*. So easy is catheterism from the perineum that a child or nurse may perform it, and it is a painless and bloodless procedure. I have seen remarkable instances in which catheterism before the operation was painful, difficult, and bloody, but after the perineal puncture had been established it was free from all the above annoyances. A point not to be lost sight of is the more effectual drainage afforded by the perineal opening as compared with the supra-pubic. This is important, for every man who is obliged to use a catheter may be looked upon as having a reversionary interest to stone in his bladder.

ABSENCE OF PATELLAR TENDON-REFLEX IN A CASE OF PARALYSIS FOLLOWING DIPHTHERIA.

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A GENTLEMAN, aged thirty-seven, applied to me on July 4th, 1879, on account of numbness in his fingers and feet. He had been in England only a fortnight, and the numbness had commenced shortly before landing in this country.

It appeared that he had left India on May 4th. Two or three weeks before his departure he complained of a soreness in his throat, which was cauterised by his medical attendant, who told him at the same time that there was a diphtheroid throat prevalent among the natives, several of whom had been in hospital under his care. The patient's throat got worse and became ulcerated, yet for about a week or ten days he continued to do duty. But he became gradually much weaker, and when put on board ship on May 4th he was not expected to live. On the voyage, however, he recovered completely, and landed in England feeling quite well, except for a feeling of numbness in his fingers, which had commenced about three weeks after the

throat had recovered. It was only since his arrival in England that the numbness had extended to his feet.

On examination I found no objective signs of disease. The patient looked well, and had no complaint to make of his general health. There was simply, he said, a little feeling of numbness in the ends of the fingers, which made it difficult to pick up small objects and button his clothes, and in the feet a similar sensation. His urine contained no albumen. The ophthalmoscope showed no change in the fundus oculi. His sight was perfectly good, and he had no difficulty in accommodation. There was no history of syphilis. The patellar tendon-reflex was normal in each leg.

On July 7th he complained of some want of power of grasp. The muscles of the forearms showed a normal reaction to induced currents.

A fortnight later (July 23rd) I saw him again. The feet and hands, he said, now felt perfectly dead. In walking he would catch his left foot. The symptoms did not affect any part of the head or trunk, but were entirely confined to the four extremities, in which there was considerable loss of cutaneous sensibility and a certain loss of power. As an illustration of the loss of sensibility in his hands, he told me that he had taken his cheroot-box out of his pocket with the full conviction that it was his purse. He had the greatest difficulty in dressing himself.

The sensibility for temperature was to a great extent retained, and he could tell the difference between a linen and a woollen material, not by the texture, but by its power of conducting heat. There was, however, some delay in the appreciation of heat impressions. He told me, for example, that he had to leave his hand in water a few seconds before he could be sure that it was of a proper temperature to use to his face.

He was weak on his legs, so that walking made him feel tired and sick, and he could not go downstairs without keeping hold of the balustrade. I noticed now that he staggered a little in his walk, and when he stood with his feet together, and the eyes were closed, he swayed about. The numbness was described as having now extended up the back of both legs.

I could find no very notable defect of electrical excitability in the muscles of the forearms, but the response in each was alike, and it is not easy therefore to be sure on this point. Examination of the urine, as well as by the ophthalmoscope, continued to give negative results. There was no difficulty in swallowing, the sight was still unimpaired, and the functions of the bladder and rectum remained normal. The patient looked well, and said that he felt perfectly well, except in respect of the symptoms described. The patellar tendon-reflex was now found to be absent from both legs.

After this I lost sight of the patient, who was living at some distance from town, until a few days since. He tells me that he quite recovered about the end of August—i.e., in about a month after his last visit. Examination now showed the patellar tendon-reflex present and normal in each leg.

The treatment consisted in the use of faradaism, and the administration of iron and arsenic.

There was a complete absence in this case of many symptoms which are so commonly present as to be almost pathognomonic of diphtherial paralysis. The voice had never acquired any nasal tone, nor was there any difficulty in swallowing, and fluids never regurgitated. The sight remained throughout perfectly good, the smallest type being able to be read at a normal distance, so that the accommodation of the eyes, which rarely escapes in the paralysis following diphtheria, was never in this instance affected. The numbness described was confined to the extremities, no part of the head or trunk being the seat of it at any time.

The disappearance of the patellar tendon-reflex whilst the patient was under observation, is interesting. It furnishes proof, if such were wanting, that this peculiar paralysis is dependent, when it affects the extremities, upon a lesion either of the spinal nerves or in the substance of the cord. A cerebral lesion would not account for this symptom. A lesion of the posterior roots of spinal nerves alone would be sufficient to interrupt the reflex; but the fact that there was loss of power as well as anæsthesia, shows that, if the lesion were not one of the substance of the cord, it must have involved either the trunks of the mixed nerves or the anterior as well as the posterior roots.

Grosvenor-street.

ON

POLYPUS AND OTHER MORBID GROWTHS IN THE NOSE:

THEIR RADICAL TREATMENT BY THE ELECTRO-CAUSTIC METHOD, AND THEIR CONNEXION WITH ASTHMA.[1]

BY J. L. W. THUDICHUM, M.D., F.R.C.P.L.

IT is my intention to bring under the notice of the medical profession, in as brief a form as possible, some general results concerning the treatment of polypus and other morbid growths in the nose, derived from practical experience extending over more than 300 cases. While in the early days of my practice I operated with the forceps like everybody else, and even had some permanent successes with it, I became convinced about sixteen years ago that this instrument had to be abandoned, and I substituted the electro-caustic platinum-wire noose for it. My first publication on this subject was made in THE LANCET fourteen years ago. My further experience was published in an essay, of which the third edition was published in 1877 by Messrs. Longmans.

The immediate objections to the use of the forceps are that it causes great pain on mere introduction, and the view into the nostril is immediately closed. It is then next to impossible to open the blades sufficiently to grasp more than a thin end; in the best case the stalk of an anterior polypus. Consequently the rest of the polypi are pushed backwards or upwards in the nose, and jammed into the narrow recesses of the upper nose. At the same time there is bruising of the mucous membrane over the ascending ramus of the upper maxillary bone, and bruising and tearing of the Schneiderian membrane of the turbinated bone and septum. Then there follows much bleeding, secondarily ulceration, and, in some cases, gangrenous destruction of ill-treated parts. But worst of all is the inefficiency of the result. If a passage is produced it frequently only lasts for a few days, and soon the nose is closed again. Only few cases of simple form—e.g., in young women—are freed and permanently cured.

Worse than these immediate evils are *the permanent evil results of forceps operations.* In some cases I have observed amongst such results, closure, partial or entire, of the nostril (atresia). In two cases, one male, the other female, the closure was complete; in another case there remained only a small opening through the membranous formation sufficient to admit a probe. In a greater number of cases the injury to the surface of the nasal cavity causes membranous adhesions between the turbinated bones and the septum. When the forceps is used by strong hands, a good deal of tearing and breaking of the turbinated bones is effected, ending in their dislocation. This disorder then heals up, and causes great discomfort. In such a case the lower turbinated bone lay against the septum and caused constant pain. I removed it entirely, and the patient was quite restored, the pain ceasing immediately. In quite a number of cases the forceps produces fracture of either the cartilaginous or bony septum. In two such cases, one from the antipodes, another from a northern county, there was a history of hæmorrhage, in consequence of which the operation was left uncompleted and the nose plugged; then followed gangrene of part of the septum, with perforation and loss of substance. These illustrations suffice to explain the preference for my new method expressed by all patients who have experienced the forceps.

The electro-caustic method of operating on nasal polypus I was the first to use. Even Middledorpf, the inventor of the electro-caustic method of operating, did not operate for nasal polypus; an illustrious member of our profession, being himself afflicted with polypus, visited Middledorpf for the purpose, as he hoped, of being operated upon by electro-cautery; but he was disappointed, and operated upon with the forceps.

The advantages of my new method over all former methods are that it is greatly superior in results; that there is no, or

[1] A paper read before the Medical Society of London on March 16th, 1880.

next to no pain on introduction of tools; that the tools are so thin that even when two or three are simultaneously used, there is yet room by their side for completely illuminating at least that part of the cavity of the nose in which it is desired to operate, and thus avoiding doing anything in the dark. The method allows freedom to the operator to shift his and the patient's position. Pain and bleeding are limited to a minimum, and the results as to the restoration of freedom of respiration through the nose are simply perfect. This method further removes all necessity to operate, for polypi, through mouth and pharynx. I have had a number of cases, from which some polypi had been elsewhere removed through the mouth from the choanæ, after numerous sittings and great torture to the patients; and yet the patients had the posterior nares filled with polypi. These cases were completely freed by my method, applied exclusively through the anterior nares. I bring the posterior polypi forward by easy traction, effected by suitable tools—blunt hooks, sharp hooks, either of steel or flexible metal, sliding hooks, fine forceps appropriately bent, and all so thin as to pass the narrowest nostril. The description which some authors have given of my method, in saying, e.g., that I used no traction, is therefore quite contrary to fact.

The mode of rhinoscopy which I have described has also been confirmed as simply perfect. The use of *choanoscopy* (erroneously called posterior rhinoscopy), is useful for diagnosis, but not for operating except in very few cases. My method of rhinoscopy (by some unnecessarily termed anterior rhinoscopy), by means of the blade specula, with spring lever attached and without any screws, has met all wants of practice. All screw specula are slow and inefficient, and I have not the slightest doubt that Voltolini's screw specula and Zaufal's internal tube specula must be rejected, as well as their methods. Indeed, Zaufal's nasal tubes or specula for seeing through the nose into the pharynx or posterior nares are quite unnecessary; moreover, they are mischievous by causing pain, and frequently hæmorrhage, sufficient at all events to entirely destroy the objects of the introduction. Compression of the spongy layer of the turbinated bone with a probe or blade is very useful; the spongy tissue yields, and a canal is produced where there was none, or the existing canal is made wider. For this purpose the laminaria is also useful, but its application requires much skill and patience.

The broad hook for drawing the soft palate forward in choanoscopy, lately recommended by Voltolini as a novelty, I have used since 1864; it is perfectly correct that a strong traction upon the soft palate is preferable to a slight one, because much better borne by the patient.

Operations by electro-cautery for the ablation of excrescences in the nose other than polypi—namely, fibrous, adenoid, osseous, or osteo-cartilaginous growths—are very successful. *Atresia*, or *closed nostril*, is opened by proceeding with the electro-caustic wire from without inward. After the cavity has been opened the projecting parts are further excised until sufficient space is produced to effect contraction in healing.

Ablation of the turbinated bone, an important operation, is effected in two stages; one act is the cutting away of the cavernous tissue with the white-hot wire; the other, the cutting away of the bone with nippers, or chisel and hammer. In most cases the removal of a short piece, of an inch, at most an inch and a half in length, suffices to establish a good canal. Polypi frequently have *bony excrescences* in their substance, which have to be similarly removed, and to be carefully manipulated to prevent wounding the nose by their sharp edges.

Adenoid tumours of the pharyngeal cavity, which alter voice, expression of face, hearing, and cause the patients to snore greatly during sleep, can mostly be detached by seizing them at the base with the sliding hook, and twisting away as for stopping a bleeding artery by twisting, until the hook comes out. By repeating this process the tumour is at last detached clean. Care must be taken to fix it through the mouth by some means, when it becomes visible, to prevent its falling into the pharynx and larynx. I have had cases in which danger was averted only by rapid action. If the tumour were swallowed the operation would lack its *corpus delicti*, which is unsatisfactory. I have cut off one such adenoid tumour by passing the loop through the one nostril until it touched the posterior wall of the pharynx; the tumour was manipulated through the other nostril; when cut off, it was drawn through the nose, and required great force to get it to pass. The case was perfectly successful, and the result important, as the subject was a clergyman.

Epithelioma of the nasal cavity is a peculiar form, and must be treated cautiously. It is always very soft, and in later stages gives rise to great hæmorrhage when touched. In this way it also terminates fatally by spontaneous bleeding. I have seen a case of such epithelioma complicated with common polypus.

Concealed abscesses in the nasal cavity give rise to much trouble. In the anterior part of the septum they exist as results of injury, such as occurs from boxing, falling, from blows by cricket-balls or swung-gates. The size which the septum can acquire in such cases is enormous. In such cases I fix a drainage-tube at the lowest point; the tube is kept in position by platinum-wire fixed on the outside of the nose by adhesive plaster. Dead bone is carefully searched for and removed, with nippers in pieces if large. Such dead bone is sometimes buried deep in thickened tissue, and is discovered only after the diseased tissue is cut away by the electro-cautery.

Abscess complicated with a small aneurism, I met with once on the septum of a medical colleague. In opening the abscess the aneurism also was opened, and I had much to do to stop the bleeding by the electro-cautery. This is the only case in which I have seen blood welling out of any part of the septum. In most cases of injury or disease the septum only oozes out blood.

Fibro-cartilaginous tumours occur on the septum in children and young persons. They are to be treated like bone if the passage is obstructed. If they are small I advise not to touch them.

The pernicious *fibrous*, *osteo-fibrous*, or *osteo-cartilaginous tumours*, which arise from the roof of the pharynx, and occur only in persons below the age of twenty-five years, are very rare, and their operation demands the greatest circumspection on account of the appalling hæmorrhage which is liable to arise in the course of it. If in such a case the tumour has advanced to the anterior nose, I should recommend the removal of the septum, and digging out of the tumour through the nose by means of the electro-caustic spoon.

Foreign bodies in the nose cause chronic diseases of the ozæna type. I operated upon a boy, supposed to have dead bone in his nose, who had a shoe-button firmly imbedded in a cavity of the cartilaginous septum.

Operation for polypus in cases where both nostrils are completely obstructed, disfigured, narrow, and distorted, has to be carried on by instruments guided by the feeling, without the aid of the eye. A lady, who had been, so to say, quite demoralised with long-standing disease, was so cured. She took the mucus from the nostrils with an ivory spoon, being quite unable to blow either nostril; was emaciated and much distressed. She insisted on the use of chloroform, under which, however, the operation could not be made. With much trouble she was persuaded to sit quiet and be operated upon without the anæsthetic. She gained confidence by little successes, and became so far restored by the removal of many polypi, none of which was ever seen previous to extraction, that she could blow her nose and inspire as well as expire through it. She would not consent to have an operation for widening the nasal canal performed upon her.

The *hearing* is affected in many cases, particularly of polypus, but also of chronic affection of the Schneiderian membrane, either on one side only, or on both sides; the patients are hard of hearing or deaf. They frequently recover immediately on removal of the choanal polypi; great is sometimes the astonishment, always the joy, of these poor people. It is, in the first instance, pressure on the choanal end of the Eustachian tube which disarranges, ultimately disorganises, the inner ear. The outer ear must be carefully examined in such cases.

According to my experience a considerable number of persons are thrown out of career, employment, or situation by diseases of the nose. Clergymen, barristers, military and naval officers, merchants, medical men, and farmers are most severely afflicted when polypi interfere with their speaking power. *The causes of polypi* frequently cannot be traced; they occur in well-made and otherwise healthy young women, and in these do not relapse when once removed. They sometimes develop during pregnancy. In one such case I have known the cystic polypus to burst, then to atrophy and require no removal. In the greatest number of cases, however, some dyscrasia or other, acquired or inherited, is the cause of the evil. Scrofula produces more frequently thickening and ulceration, and the bad forms of ozæna, than polypus.

Among the *complications of nose diseases*, particularly polypus, none is more common than *asthma*. About every fifth case of chronic nose disease has or has had asthma, continuously or at periods. Frequently this asthma disappears after removal of the polypi, even when they are very small. Some patients were so sensitive to irritation in the nose that they were seized with an attack of asthma when the cavity of the nose was touched by instruments. I have seen the most curious varieties of nose disease complicate asthma, even a red thickening of the outer nose, in very abstemious, regularly-living persons in good society. In strong men of active habits the presence of polypi in the nose leads to chronic congestion of the posterior parts of the lungs, for which there is frequently no relief except the complete removal of the nasal polypi.

The asthma is sometimes relieved by the careful use of ammonic chloride and potassic iodide. But the iodide must not be used when there is bronchitic complication. Here the most useful remedy is the inhalation of the pyrolytic vapours of extract of opium, of belladonna, of Indian hemp, of hemlock, of hyoscyamus, of stramonium. All these remedies have been used for a long time in one form or another, though not in the form here alluded to. Most patients of both sexes who came under my observation had smoked stramonium leaves, or some little rolls of blotting-paper in which a vestige of the solid contents of the tincture of these substance was contained. Some used preparations of vegetals impregnated with nitre and ammonic chloride. These powders are burnt on a tray, and the smoke is inhaled. It contains ammonic carbonate arising from the double decomposition of the potassic carbonate formed from the nitre with the ammonic chloride. These mixtures are called "cures," but seem to me to be destitute of any real alterative or symptom-relieving power.

The asthma accompanying nasal polypus may be inherited by the offspring without the polypus, just as polypus alone is sometimes inherited. Of the former I observed a remarkable case some years ago. A strong man following an open-air trade, had been suffering from gout and polypus, and intermittently from asthma for twenty years. I removed the polypus, and by medical treatment much improved the patient's general condition. I was thereupon called to see his two daughters, who both suffered from periodical asthma. In the case of the elder one the attack came on every fortnight or every twenty-eight days, and lasted from one to three days. It was bronchial spasm, causing noisy, heavy inspiration; the face was livid, and the pulse vacillating between fulness and collapse; the patient could hardly speak a word; lips and tongue were dry, cracked, and fissured. Strong doses of morphia alone relieved the disorder, and reduced its dimensions and duration, if taken as soon as the premonitions appeared. The asthma was subdued by a long course of quinine and potassic iodide. The younger sister had a spasmodic panting, resembling certain hysterical forms of that neurosis. Its attacks were less regular and shorter than those in the former case, and yielded to the same remedies. I have known polypus affecting three successive generations; in one instance, seven members of one family, of whom I treated three, were said to be affected by it.

Pembroke-gardens.

THE DIAGNOSIS OF TUMOURS OF THE CEREBELLUM.

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(Concluded from p. 589.)

ENLARGEMENT of the head takes place only in children whose cranial bones are not ossified. Their yielding sutures allow the collection of a great deal of fluid, and the attainment of large dimensions by the tumour. Similar enlargement may be produced by voluminous tumours—as hydatid—of the cerebrum. The enlargement is then not always so symmetrical, and is more frequently associated with hemiplegia.

When the various symptoms I have described are present we may diagnose with confidence—as was done in the three cases above—tumour of the cerebellum, but it must not be understood that with tumour of the cerebellum these symptoms are always present. I have seen cases of cerebellar tumour without these localising symptoms, and in their absence exact diagnosis is impossible.

In the present state of our knowledge it is impossible to fix the exact position in the cerebellum occupied by a tumour. A few years ago the same might be said regarding the cerebrum. Detailed reports of post-mortem examinations, and careful clinical records of cases of cerebellar tumour are required, in order that the cerebellum may be mapped out as is being done with the cerebrum. It is as a contribution in this direction that I offer these cases.

As regards the *nature* of tumours of the cerebellum the means at our disposal for its determination are very limited. The cerebellum is a rather favourite seat of tubercular or scrofulous cheesy tumours. Children are most liable to this form of growth, and there is always a strong probability of the tumour being of this character in the young. This probability amounts almost to a certainty when we have, either in the child or the adult, signs of scrofula present. In Case 3 the diagnosis as to the position and nature was complete, and in several other cases it has been equally correct. Almost any kind of tumour may occur—glioma, psammoma from the membranes, &c.,—but syphilomata in this position I believe to be rare.

Though my subject is the diagnosis of tumours of the cerebellum, I may be allowed to add a few remarks on the physiological importance and significance of cerebellar lesions. "The functions of the cerebellum form one of the most obscure and disputed questions in cerebral physiology," says one who has done much to clear up the obscurity.[1] Dr. Ferrier, in his valuable work, has given details regarding his own, Flourens', Hitzig's, and other experimenters' investigations into the functions of the cerebellum. Drawing attention to the importance of, and at the same time pointing out the difficulties in, distinguishing between the effects of irritative and destructive lesions, he says, "When the cerebellum is divided exactly in the median line in an antero-posterior direction, it is found that the disturbances of equilibrium, if any, are of no marked importance, and there is none of the tendency to reeling or rotation which characterises undefined lesion of the organ. It is also found that when lesions which are as nearly as possible symmetrical on both sides are made, that the disorders of equilibrium are also comparatively slight." In the *Medical Mirror*, Sept. 1st, 1869, Dr. Hughlings Jackson records a case in which there were, fourteen days before death at any rate, no symptoms referable to the cerebellum, although there was a tumour in each lateral lobe. There was paralysis of one arm owing to tumour of the hinder part of the uppermost frontal convolution. Dr. Ferrier goes on to say: "When the lesions, however, are established unsymmetrically, or unilaterally, disorders of equilibrium are more manifest, and the equilibrium is overthrown in different directions, according to the position of the lesion. When the anterior part of the middle lobe of the cerebellum is injured, the animal tends to fall forward, and in its attempts at locomotion usually stumbles or falls on its face (Flourens, Renzi). When the posterior part of the median lobe of the cerebellum is injured, the head is drawn backwards, and there is a continual tendency to fall backwards on attempts at locomotion. This fact I have determined by careful experiment on a monkey."

In connexion with these disturbances of equilibrium consequent on lesions of the cerebellum, it has been noted that temporary or permanent deviation of the optic axes occurs, or some degree of nystagmus or oscillation of the eyeballs. Thus Ferrier has shown that irritation of the middle lobe produces simultaneously movements of the eyeballs and head, and sometimes of the extremities also—just what is observed in the tonic convulsions associated with cerebellar disease.

Ferrier regards the cerebellum as a complex arrangement of individually-differentiated centres, which in associated action regulate the various muscular adjustments necessary to maintain the equilibrium of the body; each tendency to the displacement of the equilibrium round a horizontal, vertical, or intermediate axis acting as a stimulus to the special centre which calls into play the antagonistic or compensatory action. Thus *irritation* of the anterior part of the middle lobe produces backward movement of the head and

[1] Ferrier: Functions of the Brain. 1876.

extension of the trunk and limbs, together with upward movements of the eyes—actions which are to be regarded as natural compensatory efforts to counteract a seeming rotation forward on a horizontal axis; whilst *destruction* of the same part causes a tendency to fall backward. "In this latter we see," says Ferrier, "both the negative effect caused by the removal of the one centre, and the positive effect exerted by the unopposed and antagonistic centres."

The conditions may be compared to a driven horse. The horse is kept straight by the rein of each side held equally tight; when one rein is let go the horse turns to the opposite side by the negative effect of the slackened rein of one side, and the positive and unantagonised effect of the unloosened rein of the other side. Imagine a rein in front and behind, one for each side, and various other pairs in intermediate positions, the horse will be kept straight by a balance of antagonism of the several reins. Any slackening of one or more reins will be met by the combined action of the remaining unslackened reins. It will also be observed that the effects of discharging and destructive lesions may be the same; thus pulling hard on the right rein and slackening of the left rein will equally turn the horse to the right. The lesions of disease are less exact than the electrode of experimenters. So far as my observations go, we only have backward movements (retraction of head and extension of spine), with extension of legs and rigidity of arms, accompanied by movements of the eyeballs, whether the lesion of the cerebellum is irritative or destructive, or whatever part of the middle lobe is affected. Ferrier believes that cerebellar co-ordination is independent of consciousness or volition, yet in the normal state cerebellar activity is associated with that of the hemispheres, so that lesions of the cerebellum, whilst interfering with the mechanical adjustments against disturbance of the bodily equilibrium, do not cause paralysis of voluntary movements of muscles which are concerned in these actions. The facts stated by Ferrier on this point are in accordance with clinical observation—at least as regards movements of the extremities. Any directly paralytic affection of the extremities is due to pressure on the parts adjacent to the cerebellum[2]—pons and medulla—as pointed out by Vulpian, and as well illustrated by my second case. Otherwise destructive lesions of the cerebellum do not cause hemiplegia or paraplegia. Ferrier believes that the loss of reflex adjustment may be in time compensated for by an acquired power of voluntary adaptation, and thus he reconciles the facts of persistence of equilibration in an animal whose cerebellum has been removed, or in a human being when the cerebellum has undergone degeneration from a slowly progressive lesion. It will be seen Ferrier attributes the tonic convulsions and permanent rigidity noted in cerebellar lesions solely to *cerebellar* influence; the negative condition to paralysis of the parts governing the movements in one direction, the positive condition to the unantagonised parts governing movements in the reverse direction.

Dr. Hughlings Jackson has treated of the physiological bearings of cerebellar disease in various places. He believes that "in health the whole of the muscles of the body are doubly innervated—innervated both by the cerebrum and cerebellum; there being a co-operation of antagonism betwixt the two great centres. Whilst the cerebrum innervates the muscles in the order of their action from the most voluntary movements (limbs) to the most automatic (trunk), the cerebellum innervates them in the opposite order. This is also supposed to be the order of their degree of influence on parts; and is equivalent to saying that the cerebellum is the centre for continuous movements, and the cerebrum for changing movements."[3] In disease this co-operation of antagonism is interfered with, and the influence of one centre being removed, the unantagonised influence of the other centre is permitted. Thus in hemiplegia of some standing there often follows rigidity of the paralysed muscles. The paralysis Dr. Hughlings Jackson would ascribe to a lesion of the cerebrum, the rigidity to unopposed cerebellar influx; for, as he lucidly points out, whilst the primary cerebral lesion can account for the paralytic element—the negative condition, it cannot (nor can the sclerosis in the lateral column) account for the tonic contraction of the muscles—the positive condition. In destructive lesions of the cerebellum he would ascribe the weakness of the locomotory organs to loss of cerebellar innervation over the trunk muscles, and the rigidity to unopposed cerebral influx. Hemiplegia is analogous to paresis of the spinal muscles; hemiplegic rigidity to cerebellar rigidity. It may be mentioned that he adopts a similar explanation for the motor symptoms of Parkinson's disease (paralysis agitans). In this case a partial removal of cerebral influence permits that approach to tonic contractions which is seen in rhythmical tremor of the hands; on complete removal there is tonic contraction: in the spinal, and some other muscles there is rigidity without prior tremor, these being the parts the cerebellum in health influences most. In advanced cases there is universal rigidity and an attitude, he says, somewhat like that of a weak person going upstairs; the attitude in the rigidity of cerebellar disease is a great exaggeration of that of a person going downstairs. Much has, he thinks, yet to be done in comparing and contrasting the rigidity which certainly occurs with cerebral disease, and that which, quite as certainly, sometimes occurs with cerebellar disease. Tetanus, which is so closely simulated by cerebellar disease, Dr. Hughlings Jackson would ascribe to discharge of some part of the cerebellum. There is, he thinks, a cerebellar rigidity analogous to hemiplegic rigidity, and a cerebellar convulsion analogous to cerebral convulsion. This view as to the two kinds of convulsive seizures was first stated in his report of a case of tumour of the middle lobe of the cerebellum, in the *British Medical Journal*, Nov. 4th, 1871, where a rough comparison and contrast is made betwixt tetanus and cerebral convulsion. In the *Medical Times*, Oct. 26th, 1878, he institutes a more elaborate comparison and contrast betwixt tetanus and cerebral convulsion beginning unilaterally. In recording a case of choreal movements and of "cerebellar rigidity" in the *British Medical Journal*, May 15th, 1875, he writes: "In some cases of disease of the middle lobe of the cerebellum, the patient lies on his back with his legs and feet extended, the latter a little turned in; the arm is acutely flexed at the elbow, the wrist is flexed, and the palm is turned towards the front of the upper arm. The head may be thrown back." The case was one of tubercular meningitis. The hypothesis of Dr. Hughlings Jackson is of the highest importance, including as it does a physiological principle of wide application. There are, I feel bound to point out, a few practical difficulties to accepting this hypothesis *in toto*, but I am quite prepared to have them met by Dr. Hughlings Jackson when stated. In the first place he has pointed out as the difference between cerebral and cerebellar innervation, that from the former we have changing movements, or, borrowing, with him, medical terms to describe physiological conditions, clonic movements; whilst from the latter we have continuous, confluent, or tonic movements. Now, on removal of cerebral influx (as in hemiplegia with rigidity) there follows, according to him, tonic contraction from unopposed cerebellar innervation, and in destructive lesions of the cerebellum (as extensive tumours) we have tonic contraction from unopposed cerebral innervation. It seems to me, admitting his differences in character between cerebral and cerebellar innervation, that the effects of removal of the control of either is too much alike in kind. Again, the effect of discharging and destroying lesions of the cerebellum is too much alike, for in tetanus (discharging lesion) and in large cerebellar tumours (destructive lesion) we have alike tonic contraction of wide range; in the one from increased cerebellar discharge, in the other from removal of cerebellar influence. Nowhere else do we see such like effects from irritation and destruction of nervous centres. Irritate the cerebral cortex and movements are produced; destroy it, and paralysis follows. Next, if in hemiplegia the rigidity which sometimes supervenes is due to unantagonised cerebellar influence, how is it that it takes so long to come into play? why does it not appear as soon as the cerebral influx is removed? Dr. Hughlings Jackson tells me that he cannot explain this, and admits that his hypothesis is not, as yet, defensible all round. To what does Dr. Hughlings Jackson attribute the rigidity of the hemiplegic limbs coming on rapidly when a hæmorrhage of the corpus striatum breaks through into the lateral ventricle? Whilst I point out these difficulties I must state that my clinical experience is quite in accordance with that of Dr. Hughlings Jackson. I have seen some tonic contraction from subtentorial meningitis and small superficial cerebellar

[2] In the Medical Times and Gazette, Jan. 17th, 1865, Dr. Hughlings Jackson records a case of tumour of the cerebellum which had compressed the pons and crus cerebelli. He attributed the patient's irregular gait to pressure on these parts; he did not then believe that lesions of the cerebellum alone produced inco-ordination of movements. He believes that tumour pressing on the crus cerebelli produces some paralysis on the same side of the body, as Brown-Séquard long ago asserted.

[3] Medical Examiner, April 5th, 1877, p. 271.

tumours, and from destructive lesions, such as large cerebellar tumours and hæmorrhage into the cerebellum.

Finsbury-square.

CASE OF ECTROPION TREATED BY A NASO-BUCCAL FLAP; AND OTHER CASES.[1]

BY SIMEON SNELL,

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THE usual places from which flaps are taken in plastic operations on the eyelids are the forehead and temple or the upper part of the face, but the case I am about to relate was an exceptional one, and required that the portion transplanted should be derived from a different locality.

J. W. O——, sixteen years of age, is a subject of epilepsy, and on October 2nd, 1877, during a fit, he fell into the fire and severely burnt the left side of his face and head. The same day he was admitted into the Sheffield General Infirmary under the care of my colleague Mr. Barber. He made a good recovery, except that the left upper eyelid remained completely everted; and in March, 1878, Mr. Barber kindly transferred the case to me for further treatment.

His condition at the time mentioned was as follows. The left upper eyelid was altogether turned inside out, and the ciliary margin of it was drawn close up to the eyebrow and firmly cicatrised; the conjunctiva thus displayed on the inner surface of the lid was red, granular, and much thickened; the cornea was exposed, and there was no power of closing the eye. As a result of this want of protection there was some general conjunctival irritation. To obviate this and to shield the unsightliness of the eye he was compelled to cover it with a "shade." The skin also over the forehead and towards the left temple was extensively cicatrised, and on the brow near the orbital margin was a firm cicatricial band.

The boy's appearance was certainly revolting, and naturally he was desirous for something to be done to render it less evidently so. The eye was, moreover, suffering somewhat from exposure, and seemed almost to necessitate interference. The scarred condition of the tissues in the localities generally selected for taking a flap from in such cases presented a difficulty, as it appeared more than doubtful whether skin in such a state, when transplanted, would maintain its vitality. It was evident, also, that when the lid was replaced in its normal position, the gap resulting would be considerable, and the flap necessary to fill it be large.

Whilst bearing these facts in mind, and considering what would under the circumstances be the best procedure to adopt, the published Transactions of the last International Ophthalmological Congress were forwarded to me. Here I found a description of the use in two cases of a naso-buccal flap by Noyes of New York. In neither of these cases "could the usual proceedings be employed, because there was no tissue in the usual localities which could be utilised." He further pointed out that it was possible to obtain a flap fully three inches in length from the side of the nose and cheek, which would be capable of maintaining its vitality by a rich blood-supply derived from the vessels coming out of the orbit, and more on the face from the free inosculations between the terminal branches of the facial with the nasal artery. It was thus evident that a flap large enough for my purpose, and able to preserve its vitality, could be procured from the naso-buccal region. I decided, therefore, to adopt this plan, and accordingly, on March 25th, 1878, the operation was performed.

Chloroform having been administered, an incision was made through the cicatrix binding the everted lid to the eyebrow, and the tissues carefully divided until the eyelid was able to be replaced in its normal position. Next, with the object of shortening the palpebral fissure, the opposed surfaces of the lids, at the external commissure, were pared and the incisions continued outwards, so as to remove a > piece of integument from the commissure itself. The edges were then drawn together by sutures, which had the effect also of keeping the lid *in situ*, but, to still further insure this latter object, the margins of the lids were vivified at two points, and were here united by fine sutures to cause their temporary adherence. With the eyelid thus placed again in its normal position, a large raw surface was the consequence, measuring fully two inches in length and one inch in width. To obtain integument sufficient to fill this big gap, it was necessary to mark out a flap considerably larger, to allow for shrinking after dissection. An incision was now carried obliquely downwards, from the inner and lower margin of the raw surface on the upper eyelid, over the face to just below the level of the mouth, and rather more than two inches from the margin of that orifice. It was then rounded and carried back again over the nose at some little distance from its root. The pedicle was thus a little narrower than the flap was in the rest of its extent. The flap thus marked out was dissected up, care being taken to leave all the vessels as far as possible uninjured, especially at the inner orbital angle. As at first mapped out, the flap had measured three inches in length by about one and a half in width. It was now found to readily fill the rawed surface, and this without twisting. It was secured with sutures with no apparent sign of tension. The thickness of the skin, with its subcutaneous fat, occasioned a prominent and somewhat ugly appearance. It may be mentioned that the facial vein disclosed whilst raising the flap had been carefully dissected from it. Attention was now directed to the large and gaping wound left on the face by the removal of the transplanted flap. The edges were drawn together by three hare-lip pins, sutures being also placed where necessary. In this manner the wound was tolerably readily closed, and it was found to be quite unnecessary to follow Noyes in his practice of rendering the closure of the gap more easy by carrying an incision from the original wound below the lower eyelid and along the zygoma, and dissecting up the cheek thus included in these incisions. The operation was thus completed and water-dressings were applied. The time occupied was one hour and a quarter, and though this may seem considerable, the operation is necessarily a tedious one, and there is a great deal to be done. Noyes was engaged two hours in each of his cases.

The next day a little duskiness showed itself at the extreme edge of the flap at its outer side. On March 27th the sloughing had in no way extended, and appeared only superficial. The pins were removed on the third day from the facial wound, which was doing well. The sutures joining the opposed surfaces of the lids to each other gave way without producing the temporary adhesion that was desired. Granulation set in at the margins of the flap. The patient rapidly recovered, and in a few weeks left the infirmary. The flap had, however, dropped somewhat at the pedicle end, and had not become attached, as one wished, to the ciliary margin, but had fallen over and become fastened to the upper part of

[1] Read before the Sheffield Medico-Chirurgical Society.

the wound on the cheek. An attempt was made to rectify this as soon almost as it was detected, but not very successfully. The parts were given time to quietly settle down, and on Aug. 5th, 1878—the boy being again an in-patient—the inner part of the lower edge of the flap was dissected up and accurately joined to the margin of the upper lid; the edges of this part of the wound on the face being also closed by sutures. At the same time, the new eyelid seeming too bulky, the opportunity was taken of removing a small portion at the pedicle end where it was dissected up. In this way the flap transplanted on the lid was intentionally surrounded by cicatrix, with the idea, founded on a theory suggested by Mr. Teale some years since, that atrophy is induced by cicatrix, and that thus the new eyelid, which was still too prominent, would become less so. Suffice it to say this hope has been realised. I need not mention further particulars. The boy now possesses a good lid, his eye is covered, his appearance is changed, for he is now well looking. The scar on the cheek is not very noticeable, and becomes less marked. I should add, the palpebral fissure was on December 30th, 1878, brought back to its usual length by separating the lids at the external commissure.

The engravings are from photographs taken before and after the operation—the latter in October last; and in this the artist has drawn the scar on the cheek more distinct than it should be.

The operation which I have thus described does not appear to have obtained a recognised place. Noyes says he found no mention of it in the regular text-books, but supposes cases have occurred in which surgeons have employed it without having called special attention to it. Of its service, however, in certain cases there can, I think, be little doubt. In the one just related the condition of integument on the forehead and temple prevented me taking a flap from either of those regions; had it indeed been taken from the latter the cicatricial band at the inner side of the brow was where its pedicle would have been situated. In such cases, where the simpler procedures are rendered impracticable, it may be used with advantage.

I refer now to other cases, merely because they illustrate the older and simpler methods of treating ectropion. I will do so briefly.

John T. J——, about twenty years of age, suffered in childhood from an abscess beneath the right eye, evidently connected with bone. As a consequence the lower lid at its outer part had become much everted, the conjunctiva being exposed and thickened. The deformity was great, and in April, 1877, he placed himself under my care at the Sheffield General Infirmary for its relief. On April 27th he was placed under chloroform. A short space below the everted margin of lid was a depressed cicatrix, firmly adherent to a bony nodule. A little distance on either side of this two converging incisions were carried, commencing immediately beneath the ciliary margin, and uniting just below the cicatrix. The V-shaped piece of skin thus marked out was dissected up, and then pushed upwards as far as possible, and attached to the margins of the wound by sutures, whilst the gap left below the flap thus raised was closed by a hare-lip pin. The lid was by this means brought back to its proper place, but to keep it *in situ* and to shorten the elongated palpebral fissure, incisions were commenced in the lids at their outer extremities, and carried on beyond the commissure, where they were united. The triangular portion produced by these incisions was removed, and the edges of the wound closed by sutures. The case did well, leaving little or nothing to be desired.

The third case, that of E. J——, five years of age, came under my care in January, 1879, and is similar in character to the last. After measles, at the age of two years and a half, the bones of the face at various points became diseased, and now several depressed cicatrices were noticeable, the consequences of old sinuses. As a result also of one of these scars over the malar bone, the left lower eyelid at its outer part had become considerably everted, causing an ugly appearance. On Jan. 27th the case was treated in a manner almost identical with the one last referred to, and with an equally satisfactory result.

In conclusion I would refer shortly to another case in a man aged sixty-five (J. H——). From relaxation of tissues, as a result of senility, both lower eyelids had become pouted, permitting the tears to collect, and causing a chronically inflamed condition of conjunctivæ. The case was treated, the right eye on July 28th, and the left on August 4th, 1879, by removing a wedge-shaped piece of the lower lid at the centre, and uniting the edges by sutures. This produced shortening and relieved the eversion of the lid.

A MEDICO-TOPOGRAPHICAL REMINISCENCE OF THE WEST INDIES;

BEING CHIEFLY AN ACCOUNT OF THE HILL STATION OF NEWCASTLE, JAMAICA, WITH SPECIAL REFERENCE TO ITS CLIMATE AND ITS FLORA; IN CONNEXION WITH THE EXCEPTIONAL IMMUNITY FROM MORTALITY ENJOYED BY THE 29TH REGIMENT DURING THE YEARS IT WAS STATIONED IN THE COMMAND.

BY SURGEON-MAJOR BOILEAU, R.A., M.D.,

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(Concluded from p. 563.)

IT is thought by many, and maintained by not a few, that the climate of Newcastle, Jamaica, is not tropical. This, however, is a mistake—a conclusion resulting, it appears to me, from a contemplation of but one factor only—elevation. A closer investigation dispels such a notion, and proves that the elevation of the station above the sea by no means insures that security against disease which it is credited with by those who look upon its climate as sub-tropical, or even warm-temperate, in comparison with that of the plains. It is quite true that persons coming up from the plains sometimes feel even cold as they approach Newcastle; yet its climate is tropical, as I shall now endeavour to prove.

I cannot more appropriately commence this part of my subject than by referring to the "Romance of Natural History," by Gosse, in which, alluding to the mountains of Jamaica, he quotes the words of Darwin—"the land is a great, wild, untidy luxuriant hothouse."[1] The biologist recognises the tropical character of the climate, for he sees that it is favourable to the production and propagation of numbers of tropical forms of life, and it is from one of his aspects of the case that I now propose to consider it. It is especially from a botanical point of view that I will dicuss the question. The botanist, then, perceives that the inhabitants of the cantonment are exposed to the influences which favour the growth of the banana and plantain forms of vegetation and of the suffrutescent *Malvaceæ*, such as *Sidas*, *Abutilons*, and *Hibisceæ*. Within the limit of his

[1] Vide p. 177, loc. cit.

afternoon walk he meets with the great Cotton-tree (*Eriodendron*), towering high as a landmark above all other growths; and the liana forms of the tropical forest twining in company with the curious *Marcravia umbellata*, the various *Ipomeas*, the *Melastomas*, and the *Piperaceæ*. He finds, amongst the succulent *Crassulaceæ* bounding his walks, the "life-plant," or "wonder of the world" (*Bryophyllum calycinum*), throwing up its panicle to the height of four or five feet. He finds arborescent ferns, growing to the height of thirty feet, in great abundance and in high development; whilst, on the other hand, he finds not a solitary example of the common or characteristic dicotyledonous trees of temperate regions. In place of the pine, plane, elm, oak, walnut, hazel, birch, beech, chestnut, or alder, he meets with cecropias, fig-trees, anonas, avocados, coffee; arborescent atropas and solanums, mangos, and other *Anacardiaceæ;* hog-plums (*Spondias lutea*), artanthes, and East Indian jambosas. In place of the familiar ivy, he finds arborescent forms of the same family—e.g., *Hedera capitata* and *Sciadophyllum Brownei*. In place of the common nettle, he finds a shrub (*Boekmeria caudata*); wild lantanas and durantas greet the citriodoras and flowering verbenas, imported from temperate climes. The only representatives of the heath form he can find are three trees, an *Andromeda*, a *Clethra*, and the polypetalous *Cyrilla antillana*. Of the poppy tribe he finds but a single example—the "John Crow bush" (*Bocconia frutescens*). He seeks almost in vain for the plants of cold climates, but finds the *Ranunculus repens* wandering from a garden, or, perhaps to his surprise, the *Leonurus sibiricus*, or the *Leontodon* of Britain. The familiar daisy he cannot find, whilst its tropical brothers and sisters he sees in countless numbers—e.g., *Vernonia arborescens*, *Ageratum*, *Eupatorium odoratum* and *glandulosum*, *Baccharis scoparia*, *Bidens leucanthus*, *Verbesina galinsoga*, *Emilia*, *Calea*, and shrubby *Senecios*, &c.; in fact, within half an hour's walk of the station he will find amongst many others the following plants—*Coccocypsilum repens*, *Dodonæa angustifolia*, *Phytolacca decandra*, *Crotolaria striata*, numerous forms of *Cassias*, *Mimosæ* and *Acacias*, and amongst them *Acacia vespertina*, the large white heads of which become so conspicuous at sunset, and the high climbing *Cassia viminea*, with its very black pods. He will find *Clusias*, *Rytidophyllums*, *Centrosolemias*, *Stachytarphas*, *Scutellarias*, *Rhipsalis cassytha*, *Tournefortia hirsutissima*, *Leianthus longifolius*, and among the orchids, *Bletia*, *Epidendrum*, and *Isochilus*, &c. To the above I might add numerous other plants, the locality and identity of which I determined in my walks about Newcastle; but I have given enough to prove from a botanical point of view that there can be little question about the climate being tropical. I would, however, appeal to the ornithologist with his humming birds, mocking birds, buzzards, Jamaica parrots (*Crotophagia ani*), and todies (*Todus viridus*), &c.; the entomologist, who would delight us with an account of the *Lampyridæ*, which in myriads gleam at night; of the magnificent *Urania sloanus* that flies in scores by day; of the "walking leaves" and "spectre insects" which baffle attempts to find them, and of the "trap-door" spiders whose nests excite such admiration. Lastly, I would summon the meteorologist himself as a witness in my case, who should admit that a temperature below 50° F. is scarcely known at Newcastle at any time of the year; that tropical sunsets, rains, and storms prevail, and that the average temperature is only 10° F. below that of the plains.

The water-supply at the station was excellent; there was a sufficiency of the purest water fresh from the clouds and from the mountain springs and streams, from sources far above the possibility of ochlitic or zymotic contamination. It was conducted by metal pipes, and as a rule was abundant in quantity, a rule to which there need not be any exception if the pipes and tanks were always kept in proper order. The latrines were on the dry-earth system, and it worked admirably, admitting at the same time of some improvements. The system had not been extended to the officers' quarters, and the latrines attached to these were still of the old style, constructed on principles ancient, primitive, and condemned—very great nuisances, and sooner or later certain to be, as they were before, causes of disease and death. The drainage proper, both natural and artificial, was all that could be desired. The lavatories and baths were in fair condition, but a large plunge and swimming bath was very much needed. It would have been a most valuable addition to the station, and the majority of the men would gladly have availed themselves of it. The rations were good, but as the men could very rarely obtain either fish or mutton, the never-ending beef became a very monotonous diet. Vegetables and fruit could be had in great variety and abundance, and the free use of them—instinctively indulged in—no doubt contributed much to the preservation of health.

The duties, drills, and parades were of a light and ordinary character. Knapsacks were not worn, and marching out parades were unknown. The means and opportunities of recreation were very limited; there was, it need scarcely be said, no place of public amusement within reach. All ordinary out-door games were excluded by the configuration of the place, and even walking was a matter of labour, if of inclination, in consequence of the surrounding hills. The artificial lighting of the barrack-rooms was decidedly bad, and thus the men had no inducement to remain in them after the short twilight following sunset. They were tempted by the allurements of the canteen, and intemperance, either in the form of drunkenness or in the less tangible form of physical and mental degeneration, was becoming latterly too common. I would here remark that three years is quite long enough for any regiment to be stationed at Newcastle. Life there becomes monotonous, and the consequences cannot be good.

In conclusion I will briefly mention a few of the circumstances which contributed to the extraordinary good fortune of the 29th Regiment in its not having lost a single life from endemic or epidemic disease during the three years and three months that it, or a portion of it, was stationed at Newcastle, Jamaica.

First, in point of time, and perhaps of importance, the regiment arrived in the West Indies from a very healthy command—Canada—where it had been for two years, and I would suggest for consideration the fact that the 84th Regiment, which suffered so severely at Newcastle, went to the West Indies from Malta. Two years in Canada must impart to the human economy a resisting power against morbific forces very different from that to be gained by a residence of the same length of time in Malta.

Secondly. The regiment passed inside Port Royal and the dreaded "palisades" at probably the very best season of the year. It disembarked at Kingston, *en route* for Newcastle, in the last week of December.

Thirdly. There was absolutely no sickness in the regiment when it landed.

Fourthly. Whilst the regiment was at the station, the nature of the duties imposed was such as gave the men sufficient employment to neutralise or prevent as much as possible the ill effects of *ennui*, and their strength was not taxed.

Fifthly. The men had an unusually large number of "nights in bed." Their turn for night duty came round very seldom. Constantly recurring night duty is most detrimental to health.

Sixthly. The hospital and everything connected with the sick was kept most scrupulously clean. I may say punctiliously so; to such an extent, indeed, that certain officials in the command thought proper to draw attention to our extravagance. We pointed to the results, and made no change.

Seventhly. The clinical thermometer was in constant requisition. By its use the admission of a man for inflammatory or febrile diseases—unless he really had such—was guarded against. On the other hand, it prevented the occurrence of any man reporting himself sick being sent to his duty when he should be admitted to hospital. Conclusions drawn from subjective phenomena were by its aid considerably modified, and the stage of a patient's convalescence to a great extent measured. There is, however, no need to dwell here on the advantages of clinical thermometry. My remarks on the subject are of course merely a text of the enlargement they admit of.

Lastly. The health of the regiment was greatly contributed to by the unceasing supervision exercised by all the officials concerned over every matter connected with the well-being of the men.

I have only to add to the above the reasons why every regiment nowadays should look forward with little or no apprehension to spending a few years at Newcastle, Jamaica, although it is a tropical station less than 4000 feet above the sea-level. The station is isolated, and at a distance from the haunts of men; thus, to a great extent, the introduction of contagious or infectious diseases is prevented. There are no low public-houses in the vicinity: a walk to the nearest would involve an amount of physical exertion which would

be considered by most men much too dear a price to purchase their pleasure at. There is a plentiful supply of water, drawn from the purest sources; and there is an abundant supply of a great variety of wholesome fruits and vegetables. The system of conservancy is that known as the "dry-earth," and the necessary work for its proper accomplishment is all done by a corps of natives known as the black pioneers. The white soldier has no work of this nature to do. The advantages of the dry-earth system, when it can be carried out properly, are admitted. In fine, the favourable influences of the locality are such that, in the presence of due vigilance and attention to the laws of hygiene, and the absence of epidemics, it ought always to prove as healthy as it did to the 29th Regiment.

HYDRONEPHROSIS; NEPHROTOMY; RECOVERY.

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MARY N——, aged forty-six, married twenty-one years, with five children, came as an out-patient Oct. 28th, 1879. She had noticed a lump in her abdomen for a year and a half; is quite regular, the last period being a fortnight ago. Has suffered from prolapsus uteri, for which she has worn various pessaries. She is thin, and looks careworn.

On examination there was a tumour about the size of a fœtal head, occupying the right lumbar and umbilical regions. It was elastic, very movable and painless, clearly a cyst, and appearing to spring from the right kidney. The urine was examined several times, and found to be normal. There was no history of pus or blood in the urine, nor of injury in any way, and there was no appearance of malignancy, but there was an indistinct history of renal colic, to which the patient referred as having occurred about three or four years ago, and which was marked by intense pain on the right loin, frequent micturition, and the necessity for constant application of hot fomentations. On repeated examinations, seeing that it sprang from above and had clearly no reference to the pelvis, that pressure on the right kidney pressed it forwards, and that there was resonance on percussion over one portion (the lower) of it, the tumour was diagnosed as a hydronephrosis, with a fairly long mesonephron. Very curiously, it was said to become smaller at the menstrual periods. As time went on the patient was sure the abdomen was enlarging, and this, together with the fact that she was getting thinner, and was now (January, 1880) quite unable to do her household work, induced a recommendation to come into hospital and submit to an attempt at removal, or, at all events, to allow us to make an exploratory incision.

On Jan. 16th the operation was performed, which consisted of a median incision, extending from about two inches above to two inches below the umbilicus. The tumour now exposed was seen to be cystic, and was covered by the upper layer of the meso-colon. It was tapped, giving exit to a clear, watery fluid; unfortunately this got mixed with blood, and was thrown away, and so neither the quantity nor the quality could be ascertained. When the hand was passed down to the base it was found that the attachment was very broad—i.e., thicker than one's wrist,—and it appeared impossible to tie the artery and the vein, as also to tie the mass in bulk, at so great a distance, deep in the abdomen, and close to the spine. The wall of the cyst on the outer and front part was made up of true renal structure—i.e., the dilated pelvis of the kidney, in which were seen the enlarged calyces and papillæ. The other part of the cyst-wall was evidently made up of two portions: an outer, being a continuation of the capsule of the kidney; and an inner, apparently derived from the lining of the enlarged pelvis. The hand was passed into the cyst in search of a calculus in the ureter, but none was found, and it was then sponged out with carbolic solution. A wire clamp was applied about the middle of the collapsed cyst, and about one-half of the distal portion—i.e., about one-fourth of the whole mass of the cyst—was cut away, leaving one-fourth still attached to the distal side of the clamp. This large mass was left for the sake of security against slipping. Perchloride of iron was applied to it, and carbolised lint applied as dressing. About the fourth day afterwards there was noticed a slight welling up of clear fluid in the centre of the stump, which appeared likely to eventuate in the presence of a persistent urinary fistula. The clamp was cut away on the twenty-third day, and the sloughing stump gradually cleaned, so that the patient left the hospital on March 1st.

When seen again on March 15th, at my house, the wound had cicatrised with the exception of an area about the size of a threepenny-piece, at the bottom of which was a sinus, into which a probe passed for two inches directly backwards and without pain or bleeding. The patient stated that there was a daily discharge of clear fluid of from a tea- to a table-spoonful in quantity. She appeared to be quite well in herself, and there was no tumour to be felt. She expressed herself as being better, and much more comfortable than before the operation.

Remarks.—The surgery of the kidney has of late attracted a considerable amount of attention, more especially with regard to the subject of nephrotomy; and several cases have recently occurred which tend in the direction of making it a justifiable and recognised operation. This has no doubt been brought about by the greater safety of abdominal section now compared with what formerly obtained. It may be deemed suitable in some few cases, in the early stages, of encephaloid and sarcoma; in hydronephrosis, as in the case related; and in pyonephrosis, where the patient is in a state of hectic, or, rather, before that stage, if possible, has come on; and for the removal of calculus in the ureter or in the pelvis.

There appear to be certain difficulties connected with the operation which have occurred to my mind since I operated on the above case. First, there is the thickness of the so-called pedicle or base, which at so great a depth may prove a considerable hindrance to successful ligature and subsequent cutting away. Of course the clamp is out of the question for the entire removal of the kidney, as the mesonephron would seldom, I imagine, be long enough to be brought up to the abdominal wall: and kidney tumours are often very deceptive in this respect, appearing to be freely movable in all directions nearly all over the abdomen, but found to be in reality rather firmly bound down. The clamp could be applied only to the tumour itself, as in my case, and then it is a question how far the part of the cyst left attached may not continue to be a secreting surface, and so the patient, perhaps, be no better for the operation, or leave a fistulous tract, which, though relieving a hydronephrosis, is, to say the least, not a pleasant accompaniment to one's ordinary life troubles. Secondly, there is the difficulty, I imagine, in many cases of having to pass a ligature round so short a vessel as the renal artery and vein are; and, thirdly, there is the question whether, when a ligature has been passed, the shortness of the vessel, and therefore the close proximity of the ligature to the great vascular trunks, will not prevent thrombosis occurring in the proximal side of the ligature, and hence permanent occlusion. I am not prepared to answer these points, but they are such as have occurred to me in thinking on the subject.

The cases reported by Simon, Czerny, Martin, Zweifel, and more recently by Knowsley Thornton and A. E. Barker, will do much to bring nephrotomy and nephrectomy before the profession; and the foregoing case is recorded with the same view.

MEMORANDA ON SKIN DISEASES.

By H. STANLEY GALE, M.B. LOND.,
PHYSICIAN TO THE MANCHESTER SKIN HOSPITAL.

HERPES GESTATIONIS.

Two cases of this rare disease having been treated—successfully, I believe—by me during the last four years, and a third case being still under notice, it may be worth while to describe the treatment adopted.

When I saw the first of these cases I was struck with its similitude to "recurring pemphigus" (not Hutchinson's "cheiro-pompholix") both as to appearance and course. Of this latter disease I have seen several examples during the last few years, two or three of which cases had lasted three or four years, while one had lasted nine. These were treated upon general principles, the application of which in

most of these cases consisted in the internal administration of quinine in doses of three grains, when the patient could stand it, and iron when required. Cod-liver oil was added in scrofulous cases. The local treatment consisted in pricking the blebs, turning back the skin, and rubbing the spot freely with lunar caustic. The pain was severe, but all the cases were cured. (I give no details, as I am not writing of pemphigus). Struck with the resemblance, I adopted similar treatment in my cases of herpes.

Mrs. H——, housewife, aged thirty-nine, had suffered from herpes on six occasions. The eruption had usually appeared about four days prior to her confinement, and gradually increased in severity up to three weeks after that event. The blebs appeared the day after confinement, the rash before that resembling erythema papulatum. When I saw the patient first, a few days before her confinement, she was in such an irritable state that she could with difficulty hold a cup in her hand. All ordinary local sedative applications were of no avail. It was not, therefore, till the blebs appeared, and lunar caustic freely applied, that relief was given. A slight amount of irritability which remained was removed by the local application of vaseline and a hypodermic injection of morphia. After two or three applications of caustic the patient said she felt "as if in heaven." I may add that the morphia by itself does no permanent good. This woman has been confined once since without the slightest symptom of the disease, although she had suffered from it at every preceding pregnancy.

Mrs. B——, a baker's wife, aged thirty-four, suffered much from gastralgia, probably due to eating new bread. (She said she married a baker so that she could indulge this taste.) Her symptoms were, in the main, similar to those of the last case, but she did not suffer at every confinement. "On and off" she had the disease for eleven years—i.e., eight confinements. The patient, an intelligent woman, states that it was milder than usual when it reappeared after its absence during one pregnancy, and still milder after its absence during two. Previous to her last confinement but one this patient suffered for eight months from chronic eczema, and took during that time small doses of arsenic. The eruption broke out as usual, apparently unaffected by the drug. Lunar caustic was applied as in the last case, and immediately afforded relief. This patient has been confined since without any reappearance of the disease.

There can hardly be a doubt that these cases (herpes gestationis, pemphigus, and hydroa) depend upon some affection of the nervous system. They are all benefited, more or less, by nervine tonics, and accompanied by pain or nervous irritation amounting at times to almost complete prostation. I may add that my cases differed from those recorded by Milton in the following particulars, viz.:—1. No stain was left after involution. 2. In one case the eruption was chiefly on chest, abdomen, and back, and hardly at all on the limbs. 3. No solid papules, merely the condition seen in mild erythema papulatum. 4. Neither blebs nor vesicles till after delivery. 5. Neither grouping of vesicles nor crusting (when left to themselves). Lastly, there was no inflamed base to the vesicles. This confirms Dr. R. Liveing's opinion that the disease should be called "hydroa."

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam aliorum, tam proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

ST. BARTHOLOMEW'S HOSPITAL.

[OUT-PATIENT DEPARTMENT FOR DISEASES OF THE SKIN.]

FIVE CASES OF LOCALISED SCLERODERMA; REMARKS.

(Under the care of Mr. MORRANT BAKER.)

FOR more than two years Dr. J. Herbert Stowers has registered for Mr. Baker the cases of special interest in the department for diseases of the skin, and among them are the following cases of localised scleroderma or morphœa, or Addison's keloid, as it was formerly called:—

CASE 1.—Anne H——, aged twenty-one, a well-developed girl, with dark-brown hair, and somewhat florid complexion, attended on May 17th, 1878. The disease was first noticed six months before. Upon the right cheek, situated over the malar bone, there existed a circumscribed induration, circular, and measuring 1½ in. by 1 in. The skin was closely adherent to it, although the indurated mass itself moved freely over the subjacent bone. There was scarcely any visible superficial change in the skin. Some itching was complained of. Upon the left side of the face, situated also over the zygomatic process of the malar bone, an indurated and slightly prominent mass of integument was felt, measuring about 2 in. by ½ in. The colour of the skin was red, with a tinge of purple, but not sufficiently distinct to enable one to trace the outline with the unaided eye, the colouring not being coextensive with the margin. The skin was thick and "brawny," and could be taken up between the finger and thumb by its edges, feeling like a plate of semi-cartilaginous tissue. Sensation upon both sides of the face was unimpaired. The patient's general health was good, and the catamenia regular. The rest of the skin of the body was unaffected. No other member of the family had suffered from any cutaneous disease.

The patient was ordered to take three grains of iodide of potassium, with aromatic spirits of ammonia, thrice daily, and to apply a lotion of the subacetate of lead frequently. She was advised to shield the affected parts from exposure and all forms of local irritation as much as possible. After a week the prominence over the left malar bone appeared slightly less marked, but as on June 14th no further visible change having occurred, a draught containing five minims of arsenical solution with a little carbonate of soda and infusion of calumba was prescribed to be taken three times daily, and zinc ointment replaced the lotion.

On July 26th there was slight apparent decrease in size on both sides of face. Redness was less apparent.

On Sept. 13th on both sides the diseased integument appeared to be sinking in at the centre, and possibly from this cause was slightly more raised and tuberculated at the margin. The diameters remained the same. The itching originally complained of was less.

On June 24th, 1879, there was hardly any change in the condition of affected parts. The patient has not since attended.

CASE 2.—Harriet S——, aged eleven, attended on July 8th, 1878. She had never been a strong child, and had complained much of headache, giddiness, &c. Her skin had been quite clear until the end of March. The rash first appeared in irregular patches, which were red, scaly, and dry. It was stated that after the lapse of a few weeks the redness and scaliness disappeared, and a white, shining, somewhat indurated cicatrix or mass was left, but the scaly spots upon the left side of the face at the visit looked merely like spots of pityriasis simplex. The rash was confined to the face; the child had never complained of pain or itching. There were two other children living in the same house, but they were quite well, as was also the mother. The patches of morphœa were confined to the right side of the face. The largest, which was 1¾ in. by ½ in., extended from near the angle of the jaw, and passing forwards parallel to the margin of the lower jaw, terminated one inch from the angle of the mouth. Its edges were clearly defined. At the lower margin there was distinct redness from capillary injection. Below the right angle of the mouth there was a white patch, nearly circular, about the size of a fourpenny piece, and having a somewhat bluish outline. On the prolabium of the upper lip there was another white patch, about the size of a split pea. This was confined to the right side. There were three very irregularly-defined patches below the margin of the jaw in the submaxillary triangle. All the places were indurated.

On Nov. 28th, 1879, the following notes were made:—The patient has enjoyed continuous good health since last seen (more than a year ago). The right cheek presents no evidence of fresh disease, or extension of old patches. A slight dry eczema is present over the chin and upper lip. The two original patches of localised scleroderma present no changes, excepting that of almost complete absence of induration. The parts, however, when taken up between the finger and thumb, feel a little thicker than natural. Sensa-

tion is still below normal. Some slight degree of shiny whiteness, about the size of a shilling, is observed in the centre of the left cheek, also in the form of a straight line running down the forehead just to the left of the centre, about a quarter of an inch in width; also upon the right side of the nose, commencing immediately under the right eyebrow, and ceasing about half an inch from the apex. This is best seen when looked at obliquely. No structural change manifest; integument quite natural to the touch; sensation unimpaired.

CASE 3.—Catherine C——, aged twenty-nine, married, four children, first attended on April 25th, 1879. The disease began nine months before. There was no pain, but some itching was complained of. There were several patches of morphæa scattered over the lower part of the abdomen and back, extending to the upper and outer parts of both thighs. There was also a patch on the inner side of the left thigh. The affected integument presented all the usual characters, but with less thickening than usual. The colour was a faint yellowish-brown. There was also a patch commencing over left clavicle. Ordered zinc ointment to be applied locally, and syrup of the phosphate of iron and cod-liver oil internally.

No later opportunity occurred of taking a note of this case, as the patient did not attend, and a letter written to her address was returned on account of her having left the neighbourhood.

CASE 4.—Annie D——, aged twenty-four, married, one child, attended on Nov. 7th, 1879. The disease was first recognised five months before. Some itching was complained of. There was only one patch, and it had these typical characters. The sensibility slightly impaired. It was situated beneath the right mamma. Diameters 2 in. by 1¾ in. The patch was raised and well-defined, whitish-yellow in colour, with reddish margin of capillary congestion. The general health was good. Zinc ointment was ordered for the relief of the itching.

On Nov. 28th there was no noticeable change. General health continued unimpaired.

On Jan. 30th, 1880, the patient expressed herself as much relieved of the irritation from which she previously suffered, but there was no apparent change in the condition of the patch of morphæa.

CASE 5.—Charles L——, aged thirty-six, a pattern-maker, married, four children. This patient was first seen by Mr. Baker three years ago, the disease having been then in existence for seven years. The patches of scleroderma, of which there were several on each side of the abdomen, and also upon the upper part of Scarpa's triangle, were nearly symmetrically placed. They were firm, smooth, and yellowish, with unimpaired sensibility; mostly of oval outline, the long axis running in all alike, parallel with Poupart's ligament. Most of the patches measured from one and a half to two inches in their long diameter. Itching was at first a prominent symptom.

The patient ceased to attend, and was not seen again until Nov. 28th, 1879, when the following note was taken:—The special change noticeable about the patches is that the former whiteness, with reddened margin, has given place to a dark-brown pigmentation, corresponding in extent and site with the patches formerly noticed. The integument is quite smooth and soft, the induration having completely disappeared. Upon the right side of the abdomen four or five patches of dark pigmentation are also to be seen. A larger mass of darkened skin, with here and there a white spot, corresponds with the inguinal fold, similar in extent and position to that on the left side. No alteration in sensibility at this time; general health good. Mr. Godart, the librarian, has made two water-colour drawings which show well the alteration that has occurred.

Remarks by Mr. BAKER.—Cases of localised scleroderma or morphæa are so rare that it seems well to place on record an accurate note of those which are observed; and it is with this object, and not because the foregoing cases show any very exceptional characters, that they are here recorded. The disease, moreover, is spread over so long a period in each individual case that the patients are apt to present themselves at various intervals before different observers, and it is hoped that these brief notes may be of service to others under whose care the patients may happen to be in the future, by enabling them to estimate the changes which the disease has undergone, and to contribute, thus, valuable facts with regard to the natural history of this puzzling affection.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

WHOOPING-COUGH IN A MAN OF SIXTY-SIX TREATED WITH DROSERA ROTUNDIFOLIA.

(Under the care of Dr. MURRELL.)

William H——, aged sixty-six, the beadle at one of the City churches, attended the hospital in January, 1879, suffering from whooping-cough. He stated that he had had it for about three months. The attacks of coughing ended up with a distinct whoop and a violent struggle for breath. He had usually six or seven bad attacks in the day. They were not accompanied by vomiting, but terminated in the expectoration of thick sticky phlegm. The cough was most violent, and exhausted him very much, and he was glad to lie down after each paroxysm. There had been no hæmoptysis, no shortness of breath, and no night-sweating. He had lost flesh a little, but this he attributed to his loss of appetite. He was hoarse, and could not lead the singing as usual. His chest was carefully examined, but nothing wrong was detected. There was no doubt about the nature of the complaint, and one Sunday morning he whooped in church, to the consternation of the congregation. He had been exposed to whooping-cough, more or less, all his life, and thought he had caught it from some of the school children. This was his second attack, for he had had it as a child. He mentioned incidentally that his wife had it when she was sixty.

He was ordered fifteen grains of bromide of potassium in an ounce of water three times a day, and this he took for a fortnight with only slight benefit. He was then ordered a one-in-ten tincture of drosera rotundifolia (THE LANCET, August 3rd, 1878), in five-drop doses, every four hours, in a little water. He took this for a week, and then returned, saying that it had made him much worse. It increased the spasm and cough, and made him whoop more; he whooped as many as a dozen times in a single paroxysm of cough. It increased the expectoration too, and he begged that he might be allowed to discontinue the medicine. He was then ordered half-drop doses of the same tincture in half an ounce of water every three hours. At the expiration of a week he reported that there had been a very great improvement; the cough was less, and he rarely had more than one attack in the twenty-four hours. He slept better, and his appetite had improved. He took the medicine for a fortnight longer, when the cough had completely left him. He was quite well, and was able to sing bass and lead the choir once more.

The points of interest in the case are—the age of the patient and the fact of the drosera having succeeded in small doses after having failed in large.

FOLKESTONE INFIRMARY.

DOUBLE SIMULTANEOUS AMPUTATION OF LEGS JUST BELOW THE KNEE-JOINT; FRACTURE OF LEFT HUMERUS; LARGE SCALP WOUND; RECOVERY.

(Under the care of Mr. TYSON.)

A CASE very similar to the following was recorded in THE LANCET for Dec. 27th, 1879, by Mr. Hewetson of York.

J. H——, aged nineteen, a fireman, in the employment of the South-Eastern Railway Company, whilst changing the lamp in the front part of the engine, missed his footing and fell, and the wheels of the engine passed over his legs. The train was at the time of the accident slowly approaching Shorncliff station. The accident happened at 10 P.M. on Oct. 10th, 1879. About one hour later he was conveyed in a fly to the infirmary, a distance of a mile and a half.

On admission the general condition was unexpectedly good, the pulse being 80 and strong in character. The man was perfectly sensible, and appeared to have suffered little from the shock of the injury. There was no bleeding going on, nor had he, as far as could be ascertained, lost more than a trifling amount of blood. Both legs were crushed from the centre of the tibia downwards, and one was only just hanging to the body by a thin piece of tissue.

It was decided to amputate as near the seat of injury as possible, on both sides. At midnight chloroform was ad-

ministered, and the left leg was amputated in the upper third by Mr. Bateman (senior surgeon) by circular flaps, and the right leg by Mr. Tyson in a corresponding position, by antero-posterior flaps, the posterior one being transfixed, and including the muscles. A strong elastic cord was applied just above the knee-joint during the operations; only about two ounces of blood were lost; the vessels were ligatured with silken sutures. The left humerus, which was fractured in the middle, was set in the usual way. A scalp wound extended from the root of the nose, across the forehead in a semicircular course, as far as the external angular process. The wound was washed, and the edges brought together by interrupted wire sutures. The scalp wound rapidly healed by primary union, and the fracture was firmly united at the end of a month.

The stumps of both legs from the time of the operation progressed favourably; they were dressed (after the first dressing, which was of dry lint) with carbolic acid lotion and oil, then wrapped in cotton-wool. The spray was not used. Daily notes of the case were not taken, but the constitutional symptoms were comparatively mild; for beyond a slight increase of temperature and a pulse of 120° for two or three days after the operation, he appeared to ail little. The pulse was always under 100 (generally between 80 and 90), except during an attack of inflammation in the left stump about a month later, which gave rise for a few days to some feverish symptoms. He left the infirmary March 17th, 1879, walking on pin stumps, and in good health.

It may be added that the patient was a healthy young man, and had always lived an extremely steady life. The main cause of the success of the case may perhaps be attributed to the trifling loss of hæmorrhage before the operation.

NEWARK HOSPITAL.

TORTICOLLIS; INJURY TO RIGHT STERNO-MASTOIDEUS; ASCARIS VERMICULARIS.

FOR the following notes we are indebted to Mr. J. D. T. Reckitt, L.R.C.P., house-surgeon.

Fanny M——, aged three years, attended as an out-patient on February 18th. Her grandmother stated that a fortnight ago the child, whilst apparently in perfect health, was playing under an upright ladder, which fell across her chest and right clavicle, bruising the latter considerably. The next day a swelling was noticed at the sternal end of clavicle, and the head was pulled down towards the right shoulder. The child complained of pain over the swelling, which, together with the altered position of the head, continued till admission, the latter getting worse. When first seen, the child presented a healthy appearance, the head was considerably flexed towards the right shoulder, and the chin pointed over the left. There was a small swelling over the sternal end of clavicle about the size of a pigeon's egg, but no displacement of that bone, the swelling being evidently due to effusion into the sheath of the muscle (sterno-mastoid) at this point. On attempting to straighten the head much pain was caused. There was no history of worms.

Pressure was applied over the swelling at sternal end of clavicle by means of a pad of lint. A pad was placed in the axilla to keep the bone at rest, and the arm securely bandaged to the side, a suspicion arising that there might possibly be some reflex irritation from worms. Four ounces of concentrated infusion of quassia were injected, and directions were given that the motions should be inspected, and the child brought in three days.

The child was freely purged by injection, and many thread-worms were expelled. On the 21st, the neck was much straighter. Repeated injection. On Feb. 25th, more worms had been passed; the neck was quite straight; and swelling over sterno-mastoid was gone.

Remarks.—The interesting point appears to be that though the ascaris vermicularis was perhaps the main cause in producing the wryneck, yet that condition did not appear until another exciting cause in the injury by the ladder was brought to bear upon the case. Then, again, the disappearance of the effused fluid in the sheath of the sterno-mastoid simultaneously with the worms by aid of injections of quassia, makes it almost difficult to decide whether to ascribe the cause to the idiopathic or traumatic nature.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Syphilitic Stenosis of Pharynx.—Partial Metabolism by the Liver of Leucin and Tyrosin into Urea.

THE ordinary meeting of this Society was held on the 13th inst., J. E. Erichsen, Esq., F.R.S., President, in the chair. A remarkable case of extreme pharyngeal stenosis, due to syphilis, and relieved by operative measures, was communicated by Dr. Gilbart Smith and Mr. Walsham.

The following is an abstract of the paper, entitled "A Case of Extreme Pharyngeal Stenosis the result of Syphilis; with Remarks." By T. GILBART SMITH, M.D., and W. J. Walsham, F.R.C.S. The subject of this case was a woman, forty-seven years old, who was admitted on Oct. 29th, 1878, into the Royal Hospital for Diseases of the Chest, under the care of Dr. Gilbart Smith, suffering from prostration and dysphagia, accompanied by severe and recurrent attacks of dyspnœa. She gave a clear history of syphilis, which she had evidently contracted soon after her marriage twenty-six years before. She suffered for the first time ten years ago, from ulceration of the throat. This was relieved by treatment, but recurred at intervals up to the time of her admission. Eight months ago her voice became affected, and the movements of the tongue impeded. For six months she had been unable to swallow food, and for two months had suffered from severe and alarming attacks of dyspnœa. The tongue could not be protruded beyond the teeth; the right posterior pillar of the fauces was drawn backwards, and was adherent to the posterior wall of the pharynx. The uvula and a considerable portion of the soft palate had disappeared, leaving a clean semicircular border to the portion that remained. On laryngoscopic examination the epiglottis and vocal cords could not be seen, but an aperture was visible one-eighth of an inch in diameter at the bottom of a funnel-shaped depression to the left of the middle line on a level with the epiglottis. This was separated by a thick cicatricial band from another and deeper depression to the right, which terminated in a cul-de-sac, containing pus. This small aperture, after considerable difficulty, was made out to be the only entrance to the larynx and œsophagus. Tracheotomy was performed by Mr. Walsham on November 1st. On November 24th attempts at dilatation were made, and on succeeding days repeated, but they failed to produce any material benefit. Stretchings by means of laminaria and sponge tents could not be borne. On Dec. 5th Mr. Walsham partially divided the cicatricial band bounding one side of the aperture with M. Ricord's urethrotome. On the 8th it was further divided with a pair of curved scissors. One blade being placed in the aperture, the other in the ulcerated depression, incision was made little by little from above downwards so that a full view was obtained of the cut surface of the tissues, and any vessel, if divided, could be seen and secured. Care was taken to enlarge the aperture as much as possible in such a direction as would allow the food in passing downwards to avoid the entrance into the larynx. The parts were then forcibly dilated by the finger and œsophagus bougie. On Dec. 12th another incision was made at a different spot, and the epiglottis, vocal cords, and arytenoid cartilages came into view. When the patient left the hospital, Dec. 18th, the aperture measured three-quarters of an inch in diameter, and admitted a full-sized œsophagus bougie. On Sept. 23rd, 1879, she was again seen by Dr. Gilbart Smith. The aperture had not contracted in the least. Stenosis of the pharynx appears to be very rare. The authors describe three distinct forms. The first, the most common, is situated between the naso- and mid-pharynx, and is caused by ulceration and contraction of the posterior pillars of the fauces, and the drawing backwards and subsequent adhesion of the soft palate to the pharyngeal wall. Cases of this kind are reported by Messrs. Bradley, Cheevers, Reid, Coulson, and Schech. The second form is more rare; it occurs between the mouth and the pharynx, and is produced by the ulceration and contraction of the anterior fauces and the drawing downwards and

subsequent adhesion of the soft palate to the dorsum of the tongue. A case is reported by Mr. West. The third variety involves the lower part of the pharynx, as in the case now before the Society; the stenosis being produced by bands of adhesions or soft or tough membranes, which stretch across the pharynx, and glue the parts together. Other similar cases are reported by Schech, Gerhardt, Trendelenburg, Schroetter, West, and Cheevers. The authors draw the following conclusions:—1. That tracheotomy is called for both as a temporary expedient to obviate sudden death from asphyxia, and as an essential factor for safe and satisfactory treatment. 2. That division, with a guarded knife, presents advantages over other methods of treatment. 3. That several small notches are preferable to a deep incision, and that, when possible, the parts should be divided from above downwards, so as to allow a full view of the surface of the tissues divided. 4. That the aperture should be enlarged in a direction so as to permit the passage of liquid food clear of the entrance to the larynx.—Dr. HABERSHON said that the case was of great interest from its rarity and from the relief afforded by the operation. Syphilitic contraction of the upper part of the pharynx was not uncommon, but stenosis in the situation in this case was rare. He asked whether the contraction was wholly attributable to antecedent ulceration, or whether there was any evidence of new growth—as occurs in advanced syphilis. He also asked whether internal treatment—e.g., mercury and iodide of potassium—was followed after the operation.—Dr. SEMON congratulated the authors upon their success in dealing with so intractable a disease as syphilitic contraction. As a rule, simple dilatation alone was insufficient, the contraction recurring after the dilatation was left off. The preliminary tracheotomy was a wise measure, especially in the case of so narrow a stenosis as existed here. He commended the employment of gradual dilatation aided by small incisions, and said that the latter might also be made by the galvano-cautery loop, which diminished the risk of hæmorrhage. The observations of Gerhardt as to the greater liability to syphilitic ulceration of the upper over the lower respiratory passages were confirmed by a recent analysis of 10,000 cases (shortly to be published) of throat disease, 1100 syphilitic, 800 of these involving the pharynx and 300 the larynx.—Dr. FAGGE inquired whether the stenosis was wholly attributed to cicatrisation of ulcers; for he had remarked the occurrence in some cases of tracheal and bronchial stenosis without any evidence of ulceration. He had seen a case of syphilitic stenosis low down in the pharynx. The patient was under Mr. Durham's care, for stenosis of the larynx. A year later the pharyngeal stenosis became declared, and dysphagia was very extreme. Mr. Durham succeeded in relieving the patient by the passage of bougies. Mercurial fumigations were also practised in that case.—Mr. GANT asked whether the dilatation was continued after the cutting operation. He had failed in overcoming such obstructions by dilatation alone; but judging from the analogy afforded by rectal strictures, he would think that dilatation practised after incision would obviate the return of the stenosis.—Dr. R. THOMPSON thought it would have been well to have administered nutritive enemata during the treatment of the case. It would have given the affected parts rest, and supported the patient during the dysphagia.—The PRESIDENT said that many years ago he had observed by experiments on animals that the sensibility of the glottis was always much diminished after tracheotomy; so that food passing into the larynx no longer created spasm. He had noticed this also in cases of cut-throat and after tracheotomy in man. This appeared to have been so in the case related; and the point was one of importance as favouring the performance of a preliminary tracheotomy, which does not complicate subsequent operative measures, and relieves the patient from the risks attending on them.—Dr. GILBART SMITH, in reply, said that iodide of potassium was administered freely during the whole course of the case. There was active ulceration going on by the side of the cicatricial tissue; and there could be no doubt that the new tissue and thickening were due to previous ulceration. The relief afforded to the dysphagia by the operation obviated recourse to nutrient enemata, although perhaps they might have been resorted to with advantage. The effect of tracheotomy in arresting spasm of the glottis was an important fact. Allied to it was the occurrence in some cases of paralysis of the laryngeal muscles from the use of tracheotomy tubes; which has led to the suggestion that the tube should have an aperture made in it to allow of passage of air into the larynx from below, whilst the tube is worn.

A paper was then read "On the Partial Metabolism by the Liver of Leucin and Tyrosin into Urea," by EDWARD CHARLES ANDERSON, M.D., of which the following is an abstract:—"The presence of leucin and tyrosin in the urine of man, in the course of numerous diseases, shows that it is a function of the healthy liver to decompose them partly into urea, and to thereby prevent their undue accumulation within the system." It has been, and still is, universally taught and accepted that leucin and tyrosin are present, most especially in acute yellow atrophy of the liver—an exceedingly rare disease,—that, in addition, one or both have been discovered by Beale in chronic wasting of the liver, and in leucocythæmia; by Frerichs and Städeler in typhus, small-pox, and some of the other exanthemata; and Balfour infers, if he does not state positively, that they, or at least certain abnormal constituents, were present in the urine in a case of obstruction to the hepatic circulation, due to valvular disease. Murchison, however, attributed their presence in typhus, &c., as due to concurrent acute atrophy. Having met with, on Nov. 11th, 1877, a case of jaundice arising from obstruction, Dr. Anderson, more through curiosity than from anything else, examined the urine for leucin and tyrosin, and discovered them; moreover, finding that during convalescence first tyrosin disappeared and finally leucin, and that during each return of the symptoms, on future slight recurrences, leucin reappeared, he determined upon prosecuting strict and extended research for these constituents in as many pathological manifestations as came under his notice. As a result, out of thirty-three individuals (about ten of whom came under his care frequently, and therefore, counted as cases, their numbers would exceed sixty) in whose urine either leucin alone or tyrosin and leucin existed, there were of jaundice, two; mitral and aortic incompetency, one; cirrhosis, one; acute rheumatism with pneumonia, two; nephritis with dyspepsia, one; anæmia, one; phthisis with intestinal obstruction, one; phthisis, one; colic, one; pleuro-pneumonia, two; chronic bronchitis, one; hepatic derangement, five; emphysema, two; Bright's disease with presystolic and mitral systolic bruits, one; bronchitis with asthma, one; acute rheumatism, one; chronic and spasmodic asthma, three; puerperal eclampsia, one; delirium tremens, one; hemiplegia, one; pertussis, one; cancer of liver, one; puerperal septicæmia and embolism into base of right lung, one. That is to say, there were over eighteen or nineteen different diseases in which either leucin alone, or tyrosin and leucin were present; and differing in two senses; for, firstly, they differ among themselves, and, secondly, because they do not include either acute yellow atrophy, chronic yellow atrophy, typhus, small-pox, or the other exanthemata. Tyrosin is said to generally accompany leucin, but it was absent in nineteen out of the thirty-three individuals; moreover, it most usually occurs in only the severer manifestations of disease. Some physiologists assert, but by others it is disputed, that, in certain cases, urea is almost completely replaced in the urine by leucin and tyrosin. Beale found tyrosin in considerable quantity in urine which contained much uric acid. In the case of puerperal eclampsia, out of a total of five fluid ounces of urine passed in three days, albumen was copious; uric acid in enormous quantity; urea in only minute amount; much leucin and tyrosin. In the hemiplegia cases at the commencement, albumen was very appreciable; leucin abundant; urea deficient. Within a week of taking euonymin nightly albumen was reduced to a mere trace; leucin greatly lessened; more urea and water in urine. Under similar treatment a like increase of urea and diminution of leucin, or of tyrosin and leucin, occurred in Nos. 12, 23, 24, 25, 26, 29, 30, 31, of the individuals whose diseases are recorded. Dr. Anderson is, therefore, of opinion that the presence of leucin and tyrosin in the urine is due to a corresponding deficiency of urea; that this is not invalidated by the circumstance of the simultaneous existence of much leucin and tyrosin and increased quantity of urea, for during great destructive metabolism, such, for instance, as occurs in the course of many diseases, the liver is so overtaxed as to cast into the blood, not only urea in large amount, but the overplus of waste—viz., leucin and tyrosin; moreover, as convalescence advances, although the absolute quantity of urea daily eliminated may have become less, the most marked and progressive diminution takes

place in leucin and tyrosin; and, as the author has shown, occasionally in albumen and uric acid. As a strong presumption in favour of the theory that among the many functions of the liver the formation of urea from leucin, if not from tyrosin, may be ranked as one, it has been instanced that in cases of acute atrophy of the liver, where the hepatic gland cells lose their functional activity, the urea of the urine is replaced by leucin and tyrosin. If such be the case, the inference seems irresistible that the numerous diseases in which leucin and tyrosin (one or both) are shown to have been present; their diminution during convalescence; reappearance and increase during each return and exacerbation of the symptoms; their final disappearance and the order of it—viz., firstly tyrosin and then leucin; the circumstance that tyrosin appears only in and during the severer manifestations; their increase and diminution in inverse proportion to the amount of urea; and, lastly, the influence exerted by the preparations of salicin and euonymin (well known hepatic stimulants) in increasing the quantity of urea and in diminishing that of leucin and tyrosin, strengthen and support this theory in the fullest possible manner. Frerichs asserts that leucin and tyrosin are found only in the *hepatic* and *not in the portal vein*. This would seem irreconcilable, in the face of so much to the contrary, but for one possible explanation—viz., that afforded by the early stages of so-called nutmeg liver. Here, owing to "remora," there is congestion and partial stasis of the contents of the intra-lobular veins, and consequently pressure upon and interruption to the functional activity of the gland-cells immediately surrounding them.

CLINICAL SOCIETY OF LONDON.

Sympathetic Ophthalmitis after Excision of Eyeball.—"Bone-setting."

THE ordinary meeting of this Society was held on the 9th inst., Dr. E. H. Greenhow, F.R.S., President, in the chair. After Mr. Nettleship had read some interesting cases of sympathetic ophthalmitis following excision of the eyeball, a debate took place upon "bone-setting." It arose out of a communication by Mr. Howard Marsh, who, after giving details of certain cases which had come under his own notice, enumerated the various kinds of disease which were sometimes successfully treated by bone-setters. The debate occupied the greater part of the evening, and was shared in by Messrs. Hulke, J. Wood, T. Smith, C. Heath, Barwell, Brown, H. Morris, and Prescott Hewett.

Dr. STEPHEN MACKENZIE exhibited a case of Elephantiasis treated by Elastic Bandage, and Mr. CLUTTON one of Acquired Hypertrophy of one Lower Limb.

Mr. NETTLESHIP read notes of Three Cases of Sympathetic Ophthalmitis setting in three weeks after Excision of the other Eye. The first case was one in which excision was practised for the removal of a shrunken eye, with fluid cataract and corneal nebulæ following purulent ophthalmia. Twenty-two days after there was some dimness of vision in the left eye; this increased. Neuro-retinitis, followed by irido-cyclitis and chronic glaucoma, ensued. Iridectomy did not much reduce the tension of the eyeball, and permanent blindness ensued. The second was a case of rupture of the left eyeball from a blow with a screw-driver. The wound was of moderate extent, was united by single suture, and iced compresses applied. But inflammation followed, and excision was had recourse to nineteen days after the accident. Twenty-nine days after the excision acute iritis set in in the right eye, and then detachment of retina; the vision became impaired, but subsequently recovery took place. The third case was one of excision for injury to the eyeball twenty-four days before. Twenty-five days after the operation the remaining eye began to inflame, and vision was permanently impaired, but not wholly lost. Mr. Nettleship remarked that he had found notes of six published cases, in one of which the ophthalmitis set in the remaining eye five days after the excision, and in the others three days, two weeks, eight days, and forty-one days respectively. He did not think the ophthalmitis was due to the operation, but to the original disease. It was notable that out of eight cases there had been six recoveries. These cases strengthened the insistance upon early removal of eye spoiled for useful sight, and likely to set up sympathetic disease.—Mr. SPENCER WATSON questioned whether the eyes which became inflamed were not primarily diseased eyes. This seemed probable in the first case. He thought that the cases showed the importance of care in the after-treatment of excision of the eye, but he had never met with a case of ophthalmitis attributable to the operation.—Mr. NETTLESHIP did not think the other eye was diseased in his first case, where the cataract depended on perforation of the cornea.

Mr. MARSH read some cases of "Bone-setting."—No. 1. A countryman, aged fifty, dislocated his shoulder. The dislocation was at once reduced, and the arm bandaged to the side. Nine weeks afterwards he came to London for advice. It was found that the limb was so stiff that he could not move the elbow more than two or three inches in any direction; and any movement, whether on his part or during examination, produced great suffering; and he complained of constant severe aching from the shoulder to the elbow. It was noticed, however, that the joint was quite free both from heat and swelling. When he had taken gas the scapula was fixed, and the humerus was fully rotated on its long axis in the glenoid cavity, and then carried, in a series of short jerks, through all its natural range of movement. Numerous adhesions around the joint were felt to give way. He now lost much of his pain, and could move his arm freely except in an upward direction. A fortnight later the arm was carried, while he was under gas, freely above his head; after this all his pain ceased and he recovered the full use of his limb.—No. 2. A man, aged twenty-four, in jumping from a cart twisted his foot under him. Great pain and swelling followed, and the limb from the instep to the middle of the calf came out, he said, "all black and blue." He was laid up for a fortnight, and then took to walking with a stick. Eight months afterwards he came to St. Bartholomew's Hospital. The joint was still swollen, and the seat of severe pain if weight was thrown upon it. He had gone from hospital to hospital and been liberally supplied with bandages, elastic stockings, liniments, and the inevitable tincture of iodine; but he got no better. The ankle was found free from unnatural heat, indeed it was unnaturally cold; the skin was bluish and shiny, and the outlines of the joint were obscured by brawny swelling. The heel was a little drawn up, and flexion and extension were almost entirely lost. He took gas, and the joint was carried by short jerks through all its natural range. Numerous adhesions in the sheaths of the surrounding tendons were felt to give way. Within an hour he walked freely about the ward, and the next morning walked from Hackney to the hospital and reported himself ready to go to work on the limb. Six months later he came with the ankle again out of order. He said he had been quite well till three months before, when the joint had become painful and weak. On inspection, nothing could be found amiss, and he was advised to have the part strapped, and to rest it. He however said he was sure if it were "bound" it would be all right. Gas was given, and the joint was carried into full extension and full flexion. During flexion some slight adhesions were felt to give way. He wrote next morning to say that he had been walking on the limb, and found that he could now do so without either pain or limping.—No. 3 was a case of a similar character. A man, aged forty-five, could bear no weight on his ankle nine months after a severe sprain. The joint was quite free from heat. All his symptoms disappeared when the ankle was flexed and extended under gas; and in less than a week he was quite well.—No. 4. A lad, aged seventeen, of strumous family, was reported to have hip-disease. He could bear no weight on his limb, and the thigh was flexed, abducted, and rotated outwards. There was deep-seated pain at the back of the joint on any movement, and tenderness on pressure in this situation. There was no swelling. On examination, it was found that the hip-joint was sound, but it was believed there was strumous periostitis of the innominate bone beneath the external rotator muscles. He was told to rest, to have a course of blisters, and to take cod-liver oil. Three months later, as he was no better, he was taken to a bone-setter, who moved his limb. After this he lost all his pain, and in a week was "all right." Just twelve months later, having in the interval been quite well, he was, on rising quickly from his chair, seized with his old trouble. He had great pain, and felt sick, and the limb became instantly locked and intensely painful, if any weight

was thrown upon it. On examination, the thigh was found flexed, abducted, and rotated outwards; movement at once produced painful spasmodic contractions of the muscles, and there was excessive pain on pressure over the sciatic notch. He was put under gas, and the limb was gently carried through its complete range of flexion, extension, abduction, adduction, and rotation. Directly afterwards, though nothing seemed to give way, or to slip, he lost his pain, and he could freely move his limb. He has had no relapse. Mr. Marsh remarked that he had brought the subject of bone-setting forward because, undoubtedly, there were a numerous set of cases which forcible movement could speedily cure, but which had not hitherto been treated as commonly as was desirable by this means. These cases, as they made but little progress under the routine treatment of rest, liniments, and elastic stockings, frequently fell into the hands of bone-setters, by whose manipulations many of them were cured. He alluded principally to cases in which adhesions had formed in or around joints, otherwise sound, as the result of injury or inflammation. Sir James Paget was the first to draw attention to this subject in a clinical lecture given as long ago as 1867, and since published in the first and second editions of his Clinical Essays and Lectures. In this essay the principles of forcible movement as a means of treatment were very clearly and most fully laid down, and were rendered all the more distinct by being brought into contrast with those which regulate the use of perfect rest so essential for joints which were the seat of inflammation, especially of strumous disease. Displacements of cartilages and slipped tendons might be, and doubtless sometimes were, put right by bone-setters; but he believed the cases of adhesions — especially such as occurred after an injury outside a joint, which itself was healthy,—afforded by far the most numerous instances of improvement after forcible movement, and he expressed his conviction that they were much more frequent in practice than many had supposed. After referring to the classes mentioned by Dr. Hood in his lectures, the author stated that all he had observed led him fully to accord with the teaching of Sir James Paget, that when joints after injury have remained stiff, "weak," and painful, and yet free from abnormal heat, beyond the usual period of convalescence, and when they had no history of previous disease, and when a careful examination could detect no evidence of any of the diatheses, such as struma, or severe gout or rheumatism, the patient should be put under gas, and the limb should be carried in all directions through its full range of movement. As to the movement of particular joints, the author had seen good results in the shoulder, the finger joints, the knee, and the ankle. He had not used the method in either the elbow or the hip, having met with no cases which seemed suitable for it. In conclusion, he stated that if synovitis had been present movement must be very cautiously employed. In two knee cases lately under observation, in which synovitis had subsided for eight or nine weeks, and the joints had become perfectly free from swelling and abnormal heat, a renewed attack of inflammation, with heat, pain, and considerable effusion, had followed the manipulative treatment.—Mr. HULKE said they were much indebted to Mr. Marsh for bringing this very interesting subject before the Society. It was an opprobrium to surgery that so many people sought advice from bone-setters, not that patients could be prevented from sliding away, but because it was notorious that these empirics were or are in the habit of extracting written guarantees from their patients before proceeding to interfere with them; and thus the bone-setter, having shielded himself from the possible event of malpraxis, promises everything. To show how even intelligent people are blinded by the statements of these men, Mr. Hulke mentioned that he was consulted by a lady who had an enlarged bursa over the ischial tuberosity—a stiff hip-joint compelling her always to sit sideways on her chair. He explained the nature of the case, but the patient was persuaded to go to a bone-setter, who, after giving her oils for inunction, proceeded to put the "bone" in, which he did so effectually that the patient's husband declares that he "saw it go in!" He had no doubt some of the cases treated in this way were instances of adhesions, as Mr. Marsh had said, and the occurrence of such adhesions was long ago pointed out by Bonnet of Lyons. He (Mr. Hulke) had been personally the subject of such a condition. When in the Levant he fell over some rocks and injured his knee, which became acutely inflamed. The acute attack passed away, and left him with a stiff joint, so that he could not walk without support. Falling one day, his knee was bent under him, and, as he supposed, the adhesions must have given way, for on rising he found that he had regained free use of the joint, and could walk well without his supports; so that he thought there were such cases, which admitted of rapid cure when there was no actual disease of the joint. But, he added, we hear only of the benefit done by "bone-setting"; its disasters are carefully concealed. He had seen such disasters—often very grave mischief indeed; and more than once he had to excise a joint damaged from the rough usage it had suffered. One case he knew of, where there was disease of the shoulder and sinuses around the joint; the bone-setter broke down the adhesions, rekindling the inflammation, and the result was the death of the patient. If such cases could be published in their bare truth, the law would hardly shield the author from libel.—Mr. JOHN WOOD said there were cases in which the adhesions were outside the joint, especially the shoulder. A blow or injury on the deltoid was apt to be followed by great pain, lasting for months or even years. In such cases forcible movement was most successful, and the interpretation was that the subdeltoid bursa was inflamed and adherent to the muscle—a condition he had often found on dissection. Such cases were cured by manipulating the limb in different directions, or by acupuncture. But occasionally, after temporary relief, the pain returns. Where the articular cartilages are the seat of adhesions, such manipulative treatment was less likely to be permanently successful. Some of the cases of so-called misplacement of tendons were, he thought, really instances of inflammations of the sheaths of the tendons. The case which Mr. Marsh thought was one of displacement of the obturator tendon, was more likely an instance of effusion into the bursa in this situation; for it was difficult to see how the tendon could slip out of its groove; and the procedure adopted probably caused the rupture of the enlarged bursa. He had seen great mischief due to bone-setters, and this mainly in cases of hip disease; and he would warn surgeons in such cases of the impropriety of attempting too early movement, lest inflammation of the bone be again set up. He had thus seen very serious symptoms started by movement attempted twelve months after the primary inflammation had subsided. In old subjects, with tough and extensive adhesions, he had repeatedly seen fracture take place from the attempt to break down adhesions. "Sudden jerks," then, were to be deprecated; but gentle and slow movements, gradually increased in range, should be the plan followed. Not long ago he saw a lady who had anchylosis of both knees from rheumatism. Gentle manipulations succeeded in breaking down the adhesions in one knee; but in the other (which was more firmly anchylosed) the ligamentum patellæ gave way. The smooth porcellanous character of the ends of the bones, denuded of cartilage, could be felt; and in so advanced a case he was sure breaking down the adhesions did but little good. The ruptured ligamentum patellæ healed, but the stiffness returned to the joint. There was another class of cases out of which bone-setters made much capital—viz., cases of "hysterical spine"—of which he related an instance where a bone-setter, pretending that the patient had twisted her spine, proceeded to manipulate, and cured the patient at least for some months of the pain from which she had long suffered. It was just possible, of course, that in that case one of the little interspinal muscles had been displaced, and that it had been reduced by manipulation; but he was inclined to think that in the majority of cases hysteria was the real cause of the pain, and that the cure was attended by the deception of the patient on the one hand, and the bone-setter on the other.—Mr. T. SMITH asked whether Mr. Marsh advocated these measures for the relief of stiffness in a limb following union of fractures. He was inclined to believe, with Mr. Wood, that adhesions were often outside a joint, and he had followed the procedure in desirable cases of the class pointed out by Sir James Paget, Mr. Wharton Hood, and Mr. Marsh. In six cases of Colles' fracture at periods varying from six weeks to three months, where the fracture seemed to have united badly, he had broken down adhesions of tendons by free and forcible movement. In no case had any serious disturbance followed; in two or three the manipulation was repeated more than once, and was followed up with shampooing and friction. In one case, where the whole hand was stiff, he began by liberating two fingers, and then passed to the others, taking each in turn. The same methods were applicable to the after-treatment of other fractures—e.g., of thigh and leg; in the former case the knee, and in the

latter the ankle, could be set free by forcible movement from the stiffness (and in the case of the ankle the malposition) so often following fractures. He agreed with Mr. Wood as to the improbability of one of the rotator tendons of the hip slipping out of place, for its anatomical disposition hardly showed where it could slip to. But no more could he see how an interspinal muscle could be displaced.—Mr. HEATH endorsed Mr. Smith's remarks as to the after-treatment of fractures. No fracture should be considered cured until the movement of the joint was completely restored; and were this thoroughly appreciated, many a case would be taken out of the hands of the bone-setters. The same thing applies especially to cases of injury about the shoulder. The pain, &c., were generally left to time, but in his opinion time never does cure them, and it was to be regretted that some of the most eminent surgeons should take the former view. Many such cases were set right by manipulation under anæsthetics. Whether there were adhesions inside or outside the joint was an open question. In some cases—e.g., the knee—they were certainly within the joint. In breaking them down often decided loud "cracking" sound was produced, but this must not deter the surgeon. He had once fractured a humerus in this manipulation, but after union had taken place the patient was better than before. Of course, care must be exercised in the case of old people.—MR. BARWELL thought cases of slight subluxation, such as occurred in the shoulder and ankle, should not be overlooked. He had seen cases of injury where there were no ordinary signs of dislocation or inflammation, yet there was inability to raise the arm; and a slight manipulation under nitrous oxide would often put them right, so that in many cases the use of the arm was immediately regained. The same held good with the ankle and tarsus, where a condition of slight downward luxation of the scaphoid produced lameness and inability to bear the weight of the body on the foot. He thought there was also a condition of subluxation of the os calcis on the astragalus. He had met with displaced tendons about the malleoli, especially the peroneus longus tendon; although the tendon could be replaced, it was almost impossible to keep it in position. He mentioned an instance where a lameness was cured by manipulation, which reduced a tendon so misplaced; but in another case no device succeeded in keeping the tendon in its groove. He asked what was meant by adhesions within a joint. He had never seen on dissection any adhesions comparable to those of other serous membranes; but hypertrophied synovial fringes might become united, and he had seen union between two cartilages on the knee. He concluded by relating how a lady who was thrown down by a cab, and seen by a bone-setter, who declared a "bone was out," and after manipulation said she was cured. But the reverse was the case, for in addition to a dislocation of the hip, she had also a fracture of the neck of the thigh, probably produced by the manipulation referred to.—Mr. G. BROWN, referring to cases of anchylosis after acute rheumatism, said that owing to wasting of the muscles from impossibility of having early recourse to movement, the patient was unable to move the joint, although this may have been set free by passive motion. What procedure should be adopted in such cases, of which he had recently had an example under his care?—Mr. MORRIS said the debate suggested that it was not well to draw too much distinction between adhesions formed outside or inside a joint; but there were cases—e.g., in shoulder and knee—where the contraction was due to changes in the capsule of the joint itself. He had dissected a contracted knee-joint, which could not be straightened until after division of the posterior ligament. So, again, in the shoulder there might be contractions and adhesions in the capsular ligament itself. If such structures be ruptured in attempt at restoring the limb the relief could only be temporary. He asked whether it was justifiable within six or seven weeks of the injury to resort to passive movement for the relief of stiffness due to fracture of the olecranon or patella. A recent case had brought this to his mind. A gentleman broke his olecranon by a fall on the ice, and a second injury delayed union. At the end of six weeks he became impatient to use the arm. Mr. Morris was averse to moving the limb too early. A further opinion was sought, which was favourable to forcible flexion under chloroform. This broke down the fracture again, and set up inflammation of the joint.—Mr. PRESCOTT HEWETT, who spoke on the invitation of the President, said that no doubt the cases in which the bone-setter succeeds were of the class alluded to by Messrs. Heath and Smith—viz., a slight injury followed by some contraction about a joint. The knee was often the seat of this, where, as in Mr. Hulke's case, an acute synovitis was followed by lameness due to adhesions, which could be readily broken down by forcible movement. He had broken down adhesions in knee and ankle with great benefit; he had been less successful with the shoulder, and least of all with the elbow. He found that Sir James Paget and Mr. W. Hood were of the same opinion as to the slight results following such treatment of the elbow—which is often the seat of adhesion—especially after fractures of one or other condyles. He had practised forcible movement under chloroform to break down the adhesions found in connexion with contracted toes, due to wearing short and narrow shoes, such contractions occurring often after the foot had been cramped for a very short time. Some of the cases consulting bone-setters were no doubt instances of slipped tendon; he had seen this occur in the case of the biceps tendon, and in those of the peronei muscles—these being difficult to maintain in proper position. No doubt great injury is at times done by too forcible measures employed at too early a period. He was once present when manipulation employed to break down adhesion about the hip resulted in fracture of the thigh, and that in a powerful young officer. He had seen severe inflammation follow attempts to break down adhesions of the knee-joint; and in one case pyæmia followed such an attempt made on the shoulder. The worst example he knew of the injury done by bone-setters was in the case of a young gamekeeper, whose leg became inflamed and gangrenous, following the manipulations of the bone-setter. The thigh had to be amputated, and the patient died.—The PRESIDENT expressed the hope that the discussion would bear fruit; not that it would prevent people going to bone-setters, but that it would enable surgeons to lay down the lines of the scientific treatment of such cases, and show their country friends that such cases were understood and could be rationally dealt with. Quite lately a friend of his, the subject of hysteria only, fell into the hands of a bone-setter. Of course, it could scarcely be expected that surgeons would do all that the bone-setter proposes to do—they are more cautious than the latter, to whom the adage, "Fools rush in," &c., would well apply.—Mr. MARSH, in reply, said that in relieving the stiffness of a shoulder it was essential to fix the scapula, which otherwise accompanied the humerus in its movements. The sudden event of the pain and lameness, and the rapidity of its cure in his fourth case, made him attribute it to slipping of the obturator internus tendon over a ridge of cartilage. He agreed with Mr. Wood that the jerks should be slight, and he had seen cases where too much force had been used and the thigh fractured. To Mr. Barwell he said that he had seen actual adhesions in joints; and he agreed with Mr. Morris that contraction of the ligaments was likely enough to occur in severe cases.

Reviews and Notices of Books.

A Treatise on Hygiene and Public Health. Edited by ALBERT H. BUCK, M.D., American Editor of "Ziemssen's Cyclopædia of the Practice of Medicine," Instructor in Otology in the College of Physicians and Surgeons of New York. Two vols. large 8vo; pp. 792 and 657. New York: Wm. Wood and Co. London: Sampson Low, Marston, and Co. [SECOND NOTICE.]

THE second volume is divided into two parts, one relating to Occupation, the other to Public Health.

The first part is subdivided into five sections, dealing respectively with the hygiene of occupation, the hygiene of camps, the hygiene of the naval and merchant marine, the hygiene of coal-mines, and the hygiene of metal-mines.

"The Hygiene of Occupation" is from the pen of Dr. Roger S. Tracy, sanitary inspector of the Board of Health, New York. It is a very complete statement of the health-conditions involved in various kinds of occupation. Dr. Tracy divides occupation into three principal classes—namely, occupations involving the introduction of deleterious matters into the body; occupations involving exposure to conditions that interfere with nutrition; and occupations

involving exposure to mechanical violence. He distributes the various occupations in these several classes, and presents an admirable summary account of existing knowledge of their hygiene enriched by his personal experience on the subject.

"The Hygiene of Camps" is written by Dr. Charles Smart, C.M., Assistant-Surgeon U.S. Army. This article should be particularly welcome to the medical staff of our volunteer forces, and, indeed, to military medical men in general. The illustrations of Dr. Smart's subject, taken from the experience of the war of secession, are peculiarly instructive. We would especially note his observations on overcrowding in tents, on tent-hygiene, on hut-construction, and generally on the hygiene of camps and the camp kitchen. The article is a real acquisition, and it gives special consideration to the camps of civil life as well as of military life.

Dr. Thomas J. Turner, M.A., Ph.D., Medical Director of the United States Navy, has written the section on the "Hygiene of the Naval and Merchant Service." It is almost superfluous to say that it contains the result of much and extended experience effectively put together. It is remarkable how barren English literature is of works on the hygiene of a service which has been made so peculiarly a service of English-speaking people. This section forms a very welcome addition to our scanty literature on the subject.

"The Hygiene of Coal-mines" is from the pen of Mr. Henry C. Sheafer, the coal editor of the *Miners' Journal*, Pottsville, Pa., and the "Hygiene of Metal-mines" from the pen of Mr. Rossiter W. Raymond, Ph.D., editor of the *Engineering and Mining Journal*, New York City. Both are excellent articles, full of valuable information.

The second part of the volume, relating to Public Health, is divided into eleven sections, which we shall briefly note in the order of their occurrence. "Infant Mortality and Vital Statistics," by Dr. Thomas B. Curtis of Boston, Mass., is an elaborate article, of which the part relating to infant mortality has much to interest the English reader. "Adulteration of Food" is dealt with by Mr. Stephen P. Sharples, S.B., of Boston, Mass. It is a capital summary article on the subject. "Public Nuisances" are treated by Dr. Roger S. Tracy in the widest sanitary sense. He regards as a public nuisance "anything that injuriously affects the health or comfort of the occupants of two or more premises other than the premises on which it exists," and upon this text he has written an exhaustive treatise. "Quarantine" (with reference solely to seaport towns) forms the subject of an article by Dr. S. Oakley Vanderpoel, LL.D., health officer of the port of New York; and "Inland Quarantine" the subject of an article by Dr. J. J. Hawick, secretary of the Louisiana State Board of Health. Both articles will be read with much interest in view of the opinions as to quarantine entertained, and action taken, by the National Board of Health. "Small-pox and other Contagious Diseases" are considered in their hygienic relations by Dr. Allan McLane Hamilton of New York, in conjunction with Dr. Bache McE. Emmett. "Disinfectants" are treated by Mr. Elwyn Waller, Ph.D., chemist to the Metropolitan Board of Health, New York. "Village Sanitary Association" (an article of great interest), by Dr. Roger S. Tracy; and an article on "School Hygiene," by Dr. D. F. Lincoln of Boston, Mass., closes the volume.

We have thus cursorily glanced at the contents of these two volumes. It will be obvious, even from this imperfect account of their general character, that the work must take a very important place among standard treatises on hygiene and public health. There is a surprising uniformity of excellence throughout the numerous articles of which the book consists, and we apprehend that it will become a favourite one for reference. It is clearly a work which will be more highly valued the more closely it is studied. To say it is worthy of the country of its origin is to say a great deal, but not more than is deserved. Dr. Buck has achieved the heavy task he undertook, of organising the arrangements for and editing the work, with singular success.

The Atlas of Histology. By E. KLEIN and E. NOBLE SMITH. Part X. Plates xxxiv—xxxvii. London: Smith, Elder, and Co. 1879.

THIS part embraces accounts of—1. The small and large Intestine. 2. The Pancreas. 3. The Liver. 4. The Larynx and Trachea, and the Bronchi and Lung,—all subjects of much interest. Dr. Klein supports Dr. Watney's view that the absorption of chyle, or perhaps, more correctly speaking, of chyme, takes place through the interstitial tissue between the cells covering the villi, and not through the cells themselves, so far at least as the mammalia are concerned. The question of the origin of the bile-ducts seems to be still a little doubtful. After describing the bile-ducts down to the margin of the lobule where they are much branched, communicate with each other, and are lined with a single layer of more or less flattened epithelial cells, and constitute the intermediary portion of the duct, the authors give the following account of the further course of the ducts: "The intermediary portion of the bile-ducts joins the substance of the lobule in this manner: the lumen of the former passes directly into the network of bile capillaries, while the flattened epithelium, changing of course suddenly its appearance and nature, forms a direct continuity with the mass of the liver cells. The membrana propria is not continued into the lobule on to the surface of the liver cells, as is maintained by Beale, Pflüger, and others." This view is not altogether in accordance with the statements of recent writers, some still holding that the minutest ducts have a membrana propria.

We notice a few clerical errors:—"Latchenberger" should be Latschenberger, "Chrzonszswski" Chronoszczewski, and "Fry" Frey. In the following sentence "take up" is an incorrect expression:—"The interlobar connective tissue contains nerve branches and large lymphatics with valves. These latter take up lymphatic clefts and sinuses," &c. The meaning probably is "receive the contents of." The drawings are, as usual, extremely carefully and accurately drawn, and in delicacy of execution the plates of this part surpass those of the preceding.

Diseases of the Ear. By GEORGE P. FIELD, M.R.C.S., Aural Surgeon of St. Mary's Hospital, and Lecturer on Aural Surgery in the Medical School. Second Edition. London: Henry Renshaw. 1879.

THIS book is worthy to have reached a second edition in a very short time, as it has done. It is not pretentious or exhaustive, but it will be found to be very practical and helpful to the student and to the general practitioner. The three opening chapters are taken up with, respectively, the anatomy of the ear, the physiology of hearing, and the examination of the patient. Chapter 4 contains some very practical observations on affections of the external auditory meatus, and especially on the proper way of removing foreign bodies, which may be read with much advantage. Mr. Field very properly recommends the use of the syringe in preference to that of forceps and other instruments. Thereafter follow eleven other chapters dealing with all affections of the ear, and, at most length, with the commoner ones, all of which are enriched by good, though short, clinical reports of illustrative cases. A noticeable feature of the book is a number of coloured illustrations, the work of Mr. E. Noble Smith.

Mr. Field mentions the frequency with which acute catarrhal inflammation of the ear is overlooked until a discharge from the ear is noticed. It is well, when we cannot find other reasons to explain fever and restlessness and crying in a child, to suspect otitis; and we shall be

helped in forming a judgment by seeing whether the little patient refuses steadily to lie on one side, which Mr. Field says he invariably does in this affection. This is a good hint, like many others, obtained from a doctor's close observation of his own child. We can commend this book to practitioners and students.

Du Traitement Mécanique des Maladies de la Colonne Vertébrale par l'application des Corsets Plâtrés. Par OSCAR JENNINGS, M.D., M.R.C.S.E. Paris: O. Berthier. 1880.

THE treatment of curvature of the spine by "plaster-of-Paris jackets" applied during extension has not been received with so much favour, or so widely adopted, in Paris as in England and on the Continent generally. Dr. Jennings is a warm advocate of this treatment, and is anxious that Sayre's method should have a fairer trial at the hands of the profession in Paris than has yet been accorded to it. He accounts for the prejudice existing against it in France, by stating that in attempting to carry it out the French surgeons have wilfully neglected the details upon which Sayre justly lays so much stress; and he avers that the proper muslin for the bandages cannot be obtained in Paris. If this be the case, we are glad that there is at least one surgeon in Paris who is engaged in carrying out Sayre's treatment in accordance with his directions, and who, happily, is meeting with Sayre's success. The paper now published in a pamphlet form originally appeared in *La Tribune Médicale*, and we confidently expect that its wide circulation will lead many to reconsider their present convictions, with a very happy result for their patients.

THE INDIAN MEDICAL DEPARTMENT.

THE following General Order has been issued for the regulation of the administrative branch of the Indian Civil Medical Service:—

1. In continuation of General Order No. 13, dated Jan. 2nd, 1880, issued in the Military Department, and subject to such modifications as may hereafter be deemed necessary, the Governor General in Council is pleased, with the sanction of Her Majesty's Secretary of State, to issue the following orders regarding the administrative staff of the Indian Medical Department in the several provinces of India.

2. From the 31st March, 1880, the following administrative appointments will be made:—

	Monthly Salary. Rs.
One surgeon-general with the Government of India...	2700
One deputy surgeon-general, with local rank of surgeon-general, for civil medical administration in Bengal	2250
One deputy surgeon-general, with local rank of surgeon-general, in the North-Western Provinces and Oudh	2250
One deputy surgeon-general, with local rank of surgeon-general, in the Punjaub	1800
One deputy surgeon-general for civil medical administration in the Central Provinces	1800
One surgeon-general for civil medical administration in Madras	2500
One secretary to the surgeon-general, Madras... ...	800*
One surgeon-general for civil medical administration in Bombay	2500
One secretary to surgeon-general, Bombay	800*

* Consolidated.

3. The surgeons-general with the Government of India and with the Governments of Madras and Bombay will, in addition to performing civil administrative duties, be heads of the Indian Medical Departments in their respective Presidencies. It will be their duty, among other matters, to propose transfers between the Military and Civil Departments; to recommend for promotion to the administrative grades; and to advise the Government on all questions relating to the admission of officers and subordinates to the Indian Service, to the conduct and services of Indian medical officers of all grades, and to the supply of medicines and hospital stores. The surgeon-general with the Government of India will be entitled to receive any information he desires from the surgeons-general and deputy surgeons-general attached to the Local Governments and Administrations; but he will exercise no direct authority over them. These officers will be solely under the orders of the Local Government or Administration to which each belongs.

4. Officers will be selected for the above-named administrative offices by the Government of India for the Bengal Presidency and by the Governments of Madras and Bombay for those Presidencies respectively. Selections will be made in each Presidency from the whole Indian Medical Service of that Presidency; and the principles of selection, hitherto followed in making such appointments, will be observed. Surgeons-general and all deputy surgeons-general, including those who may have the local rank of surgeon-general, will count their five years term of office from the date of their first entering on the duties of their rank, whether in the military or civil branch of the service.

5. The deputy surgeon-general for the Central Provinces will also be sanitary commissioner for those provinces. As already notified in the Military Department Order above quoted, "the deputy surgeons-general of the Eastern Frontier District and of the British Burmah Division will, in addition to their military duties, exercise the civil medical administration of their respective provinces, and will also perform the duties of sanitary commissioners in them." The deputy surgeons-general of the Punjaub Field Force, and of the Scinde District, will also exercise the civil medical administration of those circles. In respect of these civil duties they will be subject to the orders of the provincial surgeon-general.

6. In all provinces for which a separate sanitary commissioner is sanctioned the sanitary department will remain distinct from, and not subordinate to, the medical department. The Sanitary Commissioner of Madras and of Bombay will, in future, have the rank and privileges of a deputy surgeon-general, as soon as he attains twenty-six years' service, or as soon as any officer below him on the list is promoted to the administrative grade; and, subject to the same conditions and limitations, the Sanitary Commissioner of Bengal, the North-Western Provinces, and the Punjaub, will have the rank, pay, and privileges of a deputy surgeon-general. This rule will apply to officers now holding the appointment of sanitary commissioner in these provinces. The five years' tenure of office by a sanitary commissioner in each province will reckon from the date of his attaining the rank and privileges of a deputy surgeon-general. In the appointment of officers to be sanitary commissioners the same principles and procedure will be adopted as in the promotion to deputy surgeon-general in the military and civil administration; but in the selection for such posts knowledge and experience as a sanitary officer will be specially considered.

7. The supervision of the Vaccination Department will form an important part of the duties of the sanitary commissioner in each province. The separate appointment of superintendent-general of vaccination, where it still exists, will be abolished, and this officer as well as the superintendent of vaccination will become a deputy sanitary commissioner under the orders of the sanitary commissioner, who will utilise not only them, but also the whole vaccination staff and the civil surgeons as far as possible in sanitary work.

8. Although the administration of the Indian Medical Department is divided into two branches—civil and military—Indian medical officers will remain as now, military officers, those in civil employ being only lent to the Civil Department, and liable to be called on for military duty in the event of their services being required.

9. Officers holding appointments which are abolished under these orders—viz., the superintendent-general of vaccination, Punjaub, and the sanitary commissioners for the Central Provinces and British Burmah—will receive a personal allowance, making the emoluments of their future offices equal to the pay they now draw.

AN application has been made by the local sanitary authorities of Bournemouth for a provisional order to enable them to purchase compulsorily five acres of land, whereon to erect a fever hospital. The building is estimated to cost from £6000 to £8000.

THE LANCET.

LONDON: SATURDAY, APRIL 17, 1880.

A NEW Parliament raises new hopes; and this irrespective of political bias, from which we are of course quite free. It would be a sad thing to believe that great political conflicts, and even great political reverses, had no good in them. Tired men get at least a period of repose. They see wherein they have disappointed public expectation and failed to realise their own promises; and another set of men, who have had the advantage of studying all their errors and the enjoyment of a period of rest, come into power. It would almost seem as if legislation nowadays was too arduous and many-sided a business to be conducted by one set of men. Lord BEACONSFIELD is too great a man not to indulge in reflections on the lessons of the election which is now wellnigh over; and though, like other moralists, he may put much down to popular fickleness, he is too wise not to perceive that in the judgment of the country there are some elements of justice. He would probably admit that the domestic legislation of this country since 1874 has been very unsatisfactory: first, that there has been very little of it; and, secondly, that this little has been weak and ineffective. There has been some excuse for this state of matters in the urgent foreign questions which have arisen since the last general election; but the urgency of foreign affairs has not been such as to afford an excuse for a Ministry so powerful as this has been doing so little to promote the domestic welfare of the nation. Both political parties need the lesson which the election teaches. It is amazing how little the keen politician of either side cares for quiet questions of domestic policy—for measures that will make health more secure, and so make life brighter and happier. Take, for example, the question of the water-supply, which has been disastrous to the present Government. It is to the lasting disgrace of both parties in the State that four millions of people have been allowed up to this time to remain at the mercy of grasping companies in the matter of a commodity as needful as light and air, and have had to put up with a short and intermittent supply of comparatively dirty water, for which they have had to pay very dearly. Though the Government cannot be congratulated on its actual proposals for dealing with this question, it is at least entitled to credit for being the first Government to perceive that the water-supply of four millions of people is a question of State magnitude, and as worthy of the attention of a strong Cabinet as the stipulations of a European treaty. Mr. CROSS may comfort himself with reflecting that he has at least raised the question out of its parochial and commercial relations into the category of those subjects which need a statesman's care.

It will be the fault of the next Government if they do not show a very considerable enlargement of view as to the duties of the State. It is to be hoped, too, that we shall see the end of that curious phenomenon "permissive legislation." Let us have either law or freedom. We can understand one or the other, but not the hybrid weakling which is neither one thing nor the other. Where there is no urgent need for restriction of personal action let us have no legislation. Where personal action is used to the disadvantage of dozens or scores of others, by all means let us have law that will powerfully and directly control personal freedom used so selfishly and injuriously. To give a habitual drunkard who is drinking himself and his family into the workhouse and into the grave, "permission" to go into a retreat for curative purposes, is to bring law itself into disrespect, and it is not very much otherwise to give rival examining boards "permission" to combine to form one board, or rate-sparing vestries in their capacity as sanitary authorities, "permission" to make—or not to make—provision for an outbreak of deadly disease. We want the *minimum* of law; the less of it the better, but that little should be strong and effective.

We venture to hope that the new Parliament, and the Government that is to be, will not be behindhand in dealing thoroughly with those great questions of public health which have so much to do with public virtue and happiness. As regards the composition of the new Parliament we shall greatly miss some whom we have ever found helpful and sympathetic. Amongst the members of our own profession whose services in past Parliaments have been most useful, but who are to be allowed to rest, we cannot forget Dr. BRADY and Dr. LUSH. We owe to Dr. BRADY the Act which secured retiring allowances to Poor-law medical officers who spend the best part of their life in the service. And we owe much to Dr. LUSH for his interest during the last twelve years in every question affecting the efficiency and honour of the profession, and, very particularly, the prevention of premature medical legislation, and the thorough representation in successive medical Bills of the questions involved in medical reform. It cannot be doubted that the new Parliament will revive the Select Committee for inquiry into this subject, but we regret to think that it cannot have the presence of Dr. LUSH, and that both Mr. ARTHUR MILLS and Mr. WHEELHOUSE, good medical reformers, will be conspicuous by their absence. The other members of the Committee are either returned or likely to be returned. Mr. MITCHELL HENRY, Dr. CAMERON, and Sir J. T. LAWRENCE have already secured their seats.

There is no reason to think that a Liberal Government will be indifferent to the settlement of this subject. Mr. FORSTER has taken great personal pains to master its details, and the Marquis of RIPON is known to feel very strongly as to the importance of non-permissive legislation for the consolidation of the Examining Boards. He used to be of opinion that this part of the question could be dealt with separately from the constitution of the Council; but the course of events has ruled otherwise, and we may now hope for the help of a new Ministry in passing a great and lasting measure of medical reform.

We are pleased to notice the return of several members of the profession for the first time to Parliament, amongst them Dr. ROBERT FARQUHARSON, of Brook-street, for West Aberdeenshire, and Dr. ROBERT DYCE LYONS, of Dublin. Both these gentlemen are hospital physicians. They are graduates, respectively, of Edinburgh and Dublin, and we

are sure they can be relied on faithfully and intelligently to represent the views of medical citizens in Parliament.

THE suggestion that the office of President of the Local Government Board should be given to a prominent member of the in-coming Ministry, and that he should be provided with a seat in the Cabinet, is so important, that we make no apology for reverting to it. There has long been a growing sense of the need which undoubtedly exists for an ample and practical recognition of the interests and principles of Public Health as an integral part of State policy. Not only do questions of a specifically sanitary character demand broader and clearer views from the supreme government stand-point; Health, as a factor in progress and as an element of prosperity, requires to be constantly represented in the innermost council of the State, where policy is shaped and the balance between those diverse and often conflicting interests which are likely to be disturbed by any new measure is adjusted. It is too much to hope that Health will ever be represented directly in a Cabinet, but nothing short of representation of some kind in that conclave will satisfy the necessities of the case. It, then, only remains to ask that the particular member of the Government who is officially charged with the control of the public health officers of the country, may be admitted to the position his office claims.

Even if the Health question were not involved in this proposal, there would seem to be cogent and strong reasons for making the claim we urge. The President of the Local Government Board is, in a *political* sense, one of the most important members of the Government. He is, in a very special way, the connecting link between the country as a whole and the Ministry. The Secretary of State for Home Affairs may guess the state of local feeling, but the President of the Local Government Board *knows*, or ought to know, how the population is affected in its localised opinion and enterprise. The fundamental principle of constitutional rule in England is self-government. The President of the Local Government Board is, so to say, the Moderator placed at the head of the multitude of local incorporations of this constitutional idea. The Government, properly so called, is the aggregate and concentration of the self-governments of the nation. These are localised, each district being a state or commune for domestic purposes, and yet the President of the Local Government Board—or the Central Board of the local governments, as it might well be called—is not in the Cabinet! He ranks as a subordinate official, although he, and *he alone*, is the embodiment of the great constitutional principle.

The Secretary for Foreign Affairs is a Minister told off to keep the outside enemies of the country in check, and to assert the international interests of the State. The Secretary for War and the First Lord of the Admiralty are the champion knights of the kingdom acting under the Secretary for Foreign Affairs. The Treasury, the Exchequer, the Home Office, are departments designed for the administration of general business. Not one of these ministries is so directly and peculiarly *representative* as that of the Local Government Board. Probably it is on this very account the President of this department stands so low in the ranks of administrators as to be universally excluded from the council of supreme government. The theory of the Cabinet doubtless is that it should be composed exclusively of representatives of the Sovereign, not of the people! The time has arrived when this senseless tradition should be broken through, and we venture to hope the party which is about to grasp the reins of government will not hesitate to take a step urgently necessary in itself, and sure to be approved by the people. There is nothing unconstitutional in the proposal we now make, though for party purposes, or as a plea for delay, it may be so represented. There could be nothing derogatory to the dignity, still less even approximating an infraction, of the Royal prerogative, in the admission of a representative of self-government to the rank of a Minister. We contend that it would strengthen the stability of the Throne to introduce a Minister into the Cabinet who should be able to give prominence to the wishes of the population as expressed in the local corporations, and whose bearing and actions towards these local corporations should be in a practical sense ministerial and representative of the Crown by something approaching a direct delegacy.

Either the suggestion we have thrown out will be unheeded by those for whose consideration it is intended, or objections will be raised. It has scarcely ever happened that a recommendation made as this has been made produced an immediate effect. That the time will come when it must be adopted we cannot doubt. It would be a graceful concession to the desires of a profession which has been much neglected of late, and a timely recognition of public expediency, if the arrangement proposed were at once carried out. Without a seat in the Cabinet no President of the Local Government Board can hope to grapple effectually with the daily increasing difficulties of the office, and no really strong and able statesman will accept the position unless he is allowed to rank as a Minister. Some step must be taken in this matter before any considerable time elapses, and probably a remedy would have been devised before this but that a most absurd arrangement stops the way. The Lord President of the Council, apparently to make business for that august but not very useful Minister, has been entrusted with certain duties which do not belong to his office traditionally, or, so far as we can see, arise out of its historic functions. If, for example, a plague to man or beast afflicts the country, the Lord President is the dignitary to put it down, although as a matter of fact, if the infliction be human the President of the Local Government Board is the only official who *can* deal with the question practically, simply because the local authorities are under his direct control, and he has his officers of health everywhere; or, if the plague be one affecting cattle, it falls to the Veterinary Department to deal with it! In no case has the Lord President of the Council either the practical knowledge, the machinery, or the local authority indispensable for a powerful effort to stamp out an epidemic disease, or carry into effect a measure of local sanitary reform. Already there have been signal instances of seeming clumsiness and complete failure on the part of this Minister, not the effects of personal inefficiency, but arising out of his official impotence. At best he can only meddle and muddle in sanitary affairs. And in any emergency his interference, or the necessity of appealing to the Lord President for authority, might be productive of the gravest consequences. Prudence requires

that an end should be finally put to this state of matters. The whole difficulty would be speedily removed if the President of the Local Government Board were admitted to the Cabinet, so that the two Ministers might rearrange their several duties and responsibilities. As it is, we greatly fear the petty jealousy of any duke who may be appointed to the office of Lord President of the Council will militate against the introduction of the nominally subordinate but practically more important administrator into the Cabinet. We point to these difficulties simply to stir the energy of some spirited and patriotic statesmen to grapple with and overcome them. That task should not be impracticable, and the moment is peculiarly well fitted for its accomplishment, while the need was never more urgent than now, or public opinion so fully prepared to endorse the change when once it has been effected.

THE General Order regulating the administrative staff of the civil branch of the Indian Medical Service has at last been published, and we think it is to be regretted that it was not brought out simultaneously with that for the military branch. Such a course would have obviated that feeling of alarm, and those expressions of discontent and anger, which were unfortunately, and, as it now seems, unnecessarily, called forth by the provisions of the first General Order. It appears that the civil medical service is to be administered by three surgeons-general, one in each of the presidencies, and four deputy surgeons-general, with local rank of surgeon-general, so that the Indian Medical Service will only lose two deputy surgeons-general by the reorganisation, and the British service has lost the same number. This loss to the Indian Service will be more than compensated by the grant of the rank, pay, and privileges of a deputy surgeon-general to each of the five Sanitary Commissioners "as soon as he attains twenty-six years' service, or as soon as any officer below him on the list is promoted to the administrative grade." The difference introduced into the system of administration by these measures appears to be that, instead of having a double staff to administer the military medical department, there will be a staff of British officers for that service, and a corresponding staff of officers of the Indian service for the administration of the civil duties. This division of duty will have the good effect of preventing any collision between the two services at times when the necessity for unanimity in action is most required, when the troops take the field. The rules hitherto in force with regard to the promotion and retirement of administrative officers in the military branch will continue in force in the civil; in fact, the medical officers are to be, as at present, military, and when on civil employment are to be considered merely as lent to the civil department, and liable to be called on for military duty when required. Three civil appointments are abolished—the Superintendent-General of Vaccination, Punjab, and the Sanitary Commissioners for the Central Provinces and British Burmah—their duties being transferred to the newly-created deputy surgeons-general; but the present holders of these appointments are to receive a personal allowance equal to the difference between the pay of the present and future officers. It will be seen that the reorganisation affects the prospects of the officers of the Indian Medical Service to a very slight extent, and there can be little doubt that with the numerous lucrative civil appointments open to them it will still continue to be the favourite service, and to command the greatest number of candidates. We speak of the service as it now exists under the rules laid down in these two General Orders. It remains to be seen whether the British Government will adopt the recommendations of the Simla Military Commission, and what effect these, if adopted, may have on the medical department; but we have not much fear of any change being introduced which will injuriously affect this very important branch of the Indian service.

WE have now before us the report[1] of Dr. AUGUST HIRSCH and Dr. M. SOMMERBRODT, who, in conjunction with Dr. B. KUSSNER of Halle, formed the medical commission sent by the German Government into the province of Astrakhan to make inquiry concerning the outbreak of plague there in the later months of 1878 and the beginning of 1879. They reached the seat of prevalence of the disease at an earlier period than the British medical commissioners (Mr. W. H. COLVILL and Dr. J. F. PAYNE), and although, like them, too late to make personal acquaintance with the disease, they were more fortunate in obtaining details as to its history, character, and progress. They had, it would appear, larger opportunity of access to documents, and of communicating with individuals who had more or less intimate acquaintance with the facts of the outbreak. This is manifest in the more elaborate description in which they are enabled to indulge, and the more precise information they afford as to the symptoms and progress of the malady. Substantially, however, they add little to what Mr. COLVILL, Dr. PAYNE, and others have made known to us of the general history and characters of the outbreak. They agree with the British medical commissioners in accepting the facts that the disease broke out in October, 1878; that it continued until the end of January, 1879; and that it appeared in six places, but in one only—namely, Vetlianka—assumed an epidemic form. But when they enter upon the discussion of the origin of the malady, they diverge in opinion from Messrs. COLVILL and PAYNE. These gentlemen were unable to accept the theory of transmission of the infection of plague from Resht or elsewhere to the banks of the Volga. Mr. COLVILL saw in the local conditions of the Volga, at the locality affected (these closely corresponding with the conditions under which plague had been observed in Mesopotamia), a source of origin; and Dr. PAYNE, while not altogether disagreeing with this view of the subject, expressed a much more guarded opinion upon it. Messrs. HIRSCH and SOMMERBRODT, rejecting the theory of local origin, are inclined to believe that the disease was brought to the Volga by infected articles of clothing carried into the district by Cossacks returning from the seat of war in Asia Minor. The difficulties in the way of accepting this theory appear to us well-nigh insuperable. The fact is, in regard to this question of origin of the outbreak, that evidence which would help to a definite conclusion is not as yet forthcoming. And this is in truth

[1] Mittheilungen über die Pest-Epidemie im Winter 1878-1879 im russischen Gouvernment, Astrachan. Berlin: Carl Heymann's Verlag. 1880.

what both the British and German Commissioners say when their words are reduced to their simplest expression. The foreign medical commissioners were on the ground too late for a successful elucidation of a question of so much difficulty, and which had to be worked out among a population whose language was unfamiliar to them, and under considerable restrictions of movement. Whether the Russian medical authorities, when their report on the outbreak is published, will be able to throw light on this subject, seems very doubtful indeed. We are thankful, however, to have in this report of Drs. HIRSCH and SOMMERBRODT, the most complete statement of the facts of the outbreak which has yet appeared. A high compliment is paid by the Commissioners to Count LORIS MELIKOFF for his energy in stamping out the relics of the plague on the Volga, but as the disease was rapidly dying away when the Russian Government first interfered for the arrest of the outbreak, it does not clearly appear that either measures of quarantine or measures of hygiene exercised any real effect in limiting the malady to the district thus infected, or in favouring its extinction.

Annotations.

"Ne quid nimis."

THE DISPUTE AT GUY'S.

IN the current number of the *Nineteenth Century*, Miss Margaret Lonsdale, the authoress of "Sister Dora," a work which has attracted a good deal of attention of late, gives to the public her version of the dispute now existing between the treasurer and the staff of Guy's Hospital concerning the nursing arrangements. In doing this, Miss Lonsdale has succeeded in widening the breach existing between the lay and medical authorities, and has given additional strength to the position taken up by the latter. Miss Lonsdale states that the medical staff are resisting the introduction of "the new system of nursing" which replaced the old system in November last. In the course of her article, contrasting the two systems of nursing, she makes the following accusations against Guy's Hospital, either directly or by implication:—

1. That Guy's has hitherto been nursed to a great extent by women of the charwoman class, into whose moral character no adequate inquiry was made, who were wholly without training in the matter of nursing, who spent their leisure time "too often, alas! in the nearest public-house," whence they returned "at the regulation hour more or less the worse for drink." "I am far from saying," says the writer, "that every nurse under the old system was drunken or dissolute, but I do say that, as a rule, their moral character was unsatisfactory, and that the long hours of work, with no regular interval allowed during the daytime for proper air and exercise, together with the practice of eating their food in the impure air of the wards, render the supporters of the old system largely responsible for the low moral, as well as physical, condition of the nurses who work under it."

2. That the night nurses slept whenever they could, "regardless of the wants and dangers of their patients, of whose pillows and blankets they often made free use for their own convenience and comfort, and helped themselves from the patients' private store of food, and, whenever it was practicable, from the patients' allowance of wine and spirits as well." (What, it will be asked, is the advantage of the free press of these enlightened times if such scandals could go on uncontrolled?). Further, that they did their own "washing" during the hours of the night, and converted the ward into a drying ground; and that for the duty of night nursing "very aged and feeble, to say nothing of hopelessly drunken, women were considered fit."

3. That both day and night nurses were under the control of a "woman called the 'sister,'" who was little more than an experienced housekeeper, who, among other duties, "kept and gave out the wine and spirits ordered by the doctor, and either partook of them or not herself as she felt disposed." "It was unusual for a 'sister' to be moved from one ward to another, and therefore, in course of time, if she were at all an intelligent woman, in spite of a want of general education and a total absence of any special training in the work of her calling, she would become expert in various ways, especially in attendance upon the medical staff, and in prompt and skilful obedience to their orders. *She would learn to watch critical cases in the doctor's absence, and to act with ability under his orders.* [The italics are our own.] After some years at her work it would be strange indeed had she not accumulated a certain amount of experience in the treatment of various diseases of the particular kind she may have had to deal with in her own ward. But all this time she must have remained in absolute ignorance of the first principles of nursing the sick, for she had never seen nursing practised, much less had she been taught to nurse herself."

4. That the doctors go so far as to say that "if the nurses were drunken and dissolute it was of no consequence," &c.; that doctors are not necessarily sole to tell good nursing from bad, and that because they want the sisters in the wards when they make their visit they object to their getting air and exercise.

5. That doctors object to the new system, because they fear that public attention may be drawn "to practices and experiments which are better not mentioned beyond the walls of a hospital." That they dislike the moral restraint which the presence of the modern "sister" imposes upon them, and they object to be obliged to "consider either their own manners or the feelings of the nurses." "The presence of refined intelligent women in the wards imposes a kind of moral restraint upon the words and ways of both doctors and students, which some of them desire to get rid of, and I have no hesitation in saying that it is against this, as much as anything else, that they are now at Guy's Hospital resisting with all the might they possess. Yet this unconscious restraint might in time prove powerful to smooth down the roughnesses of medical students, who are, as a class, universally acknowledged to be uncouth."

6. That the presence of the medical staff in the wards is often "a hindrance of a serious kind to the nurse's work;" that students dare to go behind screens without asking the permission of the officiating nurse, and regard nurses as machines for answering questions and clearing up "any mess they may choose to make." That "familiarity" existed between house doctors and nurses, and that this "contributed largely to the low tone of morality for which the wards were remarkable."

This is the indictment which Miss Margaret Lonsdale brings against the physicians, surgeons, students, sisters, and nurses of Guy's Hospital. In every class of persons there will be a certain number who are ignorant and vicious, but we cannot think that the public will regard Miss Lonsdale's article as anything more than an angry tirade, which is not meant to be taken literally. It is easy to gather up hearsay and bits of scandal and to write as if faults were the rule and not the exception; but such a course is not wise, is not charitable, and it will be repudiated by many of the followers of Florence Nightingale.

Miss Lonsdale is a clever writer, but she is impetuous and lacks judicial spirit. The article demands no serious answer from us. We only hope that the treasurer and governors of Guy's Hospital will, one and all, read it carefully, and that they will then appreciate the dangers of the sentimental course upon which they have entered.

THE ANNUAL "CHANGE."

THE season, so far as it is governed by the Session of Parliament, will probably be late this year; if, indeed, it be possible to enter upon serious business after the commotion and delay which have occurred. It may not be a regretful consequence of this state of things if the effect should be to postpone the annual "change," to which most persons are already looking forward, to a little later in the year than custom determines. Of course, the time of movement for the multitude of sportsmen and their families will be governed by the festival of St. Grouse, which occupies a fixed place in the calendar; and as this particular saint is much worshipped by those who owe their first allegiance to St. Stephen, the session of Parliament—however important or urgent its responsibilities may be—must be arranged to suit the grouse. The postponement is not, therefore, likely to be for long. If it has the effect of enabling the ordinary class of Londoners to enjoy their "outing" some six or eight weeks later than usual, the experience is not unlikely to be both pleasing and satisfactory. We manage our holidays badly in England; some go too early, before the long dragging trail of the winter has been obliterated by summer suns; others contrive, or are compelled, to go away in September and October, when London is most enjoyable. A considerable proportion of the ordinary population of the metropolitan district have no notion how bright and cheery the parks, and even the streets of the great city, are during the months in which fashion has ordained that the upper and the upper middle classes shall desert the capital. Later on, in November, when the wandering great return to their homes, they find ample cause for complaint as to the climate of London, and regret their inability to remain out of it. Could the holiday season be so arranged that we left London in October or November for, say, six weeks, and took a second holiday of the same length in the spring, we should succeed in making the best of life by living in the best places at the best times. The effect on both health and spirits would be beneficial, because it would sometimes happen that we saw other great cities—for example, Paris and the Continental capitals—when their ordinary inhabitants were at home! As it is, we are wont to find the normal elements of social life absent in our travels abroad. The conditions of climate are not so equable over these isles and the adjacent Continent, that it is impossible to arrange the interchange of visits, so that the multitude of "change" and health seekers may be advantaged in respect both to society and sun.

ENTERIC FEVER IN SHEFFIELD.

THE prevalence of enteric fever in Sheffield has during the past few months assumed epidemic proportions. During last year it appears from the returns of the Registrar-General that 91 deaths were referred to fever, principally enteric, within the borough, of which 36 were registered in the fourth quarter. In the first thirteen weeks of this year, ending 3rd inst., no less than 64 deaths from fever were recorded, and six other fatal cases were returned last week; these figures imply, on the assumption that the proportional mortality of the disease has not exceeded the average, that since the beginning of the year there have been more than 700 cases of enteric fever within the borough. The fatality of fever in England continues to decline both steadily and rapidly, and during the last quarter its annual death-rate in twenty of the largest English towns averaged only 0·25 per 1000; in the several towns it ranged from 0·04 and 0·05 in Brighton and Wolverhampton, to 0·40 and 0·84 in Liverpool and Sheffield. Thus the death-rate from fever in Sheffield last quarter was more than twice as great as that which prevailed in Liverpool, the town with the next highest rate. The annual rate of mortality from all causes in Sheffield has for some time been remarkably low, and averaged but 21·6 in the first quarter of this year, against 25·5, the average rate in the twenty towns. It may be presumed, therefore, that the recent excessive number of fever deaths in Sheffield is due to a specific outbreak, the causes of which we trust will be carefully investigated. We may take this opportunity to note that so far as we know no annual report on the sanitary condition of Sheffield has been published since the late Dr. Griffith's report for 1877. This is subject for regret, since the Sheffield reports published by the late medical officer were valuable contributions to urban vital statistics. Sheffield is the only large English town from which we have been unable to obtain a health report for 1878. We trust that Dr. Hime intends to publish a bi-annual report for 1878 and 1879, in order that there may be no break in the series of statistical reports for the borough.

SALE OF POISONS.

ONCE more the attention of the public has been directed to the notorious abuse of the Sale of Poisons Act; this time by Mr. Henry Hubbard, vice-president of St. Mary's Hospital. Having recently been called to a case of death from an "overdose of chloral taken through misadventure," he practically tested the facility with which this and allied drugs are obtained, by sending round one of his younger children to various chemists and grocers, and found no difficulty in thus obtaining from them, without any restriction or question whatever, those poisonous drugs. The reason for the facility lies in the fact, repeatedly pointed out in these columns, that certain special preparations of chloral, &c., are protected by the Government stamp as patent medicines. Mr. Hubbard has done good service in again drawing attention to the anomalies of our law—which allows the protection of a patent to materials which are poisonous in any guise,—to the advantage it may be of the public purse, but to the great danger of individual members of the community.

DIPHTHERIA AND TYPHUS IN RUSSIA.

FROM the 27th January to the 13th March, 269 villages were reported infected with diphtheria in the Government of Poltava. The population of these villages amounted to 451,937, and during the period referred to there were 908 new cases of diphtheria, of which 520 were fatal. Diphtheria is still seriously prevalent in Voronege and its suburbs. The hospitals are said to be encumbered with patients. The disease has broken out in the government of Yénisseisk. The larger number of the villages are infected, and there is great want of medical aid and of hospitals. From the 6th to the 13th March there were 730 deaths recorded in St. Petersburg (475 males and 255 females). Typhus caused 22 per cent. of the mortality. The deaths reported from maculated typhus were 64 in number.

In a sitting of the Medical Society on the 26th March, Professor Andreïcosky read a report on hygiene, and particularly on the hygiene of schools. He spoke highly of the hygienic regulation of English schools, described this as "une véritable perfection," and as the envy of other nations of Europe!

At Kharkov a special course of training, of three weeks'

duration, has been organised for sisters of charity. Three detachments of sisters have undergone this course already, and a first detachment, ten in number, after an examination, has been despatched to give assistance in localities where diphtheria is prevalent. A second detachment, consisting of twenty-eight sisters, will presently follow. A third is being prepared for examination. The course of instruction is for the most part practical, and given in the hospitals. During the progress the sisters receive four lessons in anatomy and physiology, three in pharmacy, three specially relating to diphtheria, and eighteen in hygiene and disinfection. If the sister passes a successful examination she receives a certificate stating her fitness to join a sanitary detachment.

BROWN-SEQUARD ON THE TRANSFER OF SENSIBILITY.

AN interesting communication was made to the Académie des Sciences at its last meeting by Dr. Brown-Séquard, on the substitution of hyperæsthesia by a lesion of the nerve centre, for anæsthesia produced by a previous lesion. In animals of three species—dogs, guinea-pigs, and rabbits—especially in the latter, he first divided one-half of the pons Varolii immediately behind the middle cerebellar peduncle. The effect of this lesion varied, even as regards sensibility. Frequently, however, especially in rabbits, the same effect was produced as by a hemisection of the spinal cord—more or less considerable hyperæsthesia on the side of the lesion, and more or less marked diminution (sometimes complete loss) of sensibility on the opposite side. Each change was most marked in the hind limbs. He then divided the opposite half of the spinal cord at the level of the sixth dorsal vertebra, and quickly found that after this second lesion the corresponding hind limb, which had lost sensibility after the cerebral lesion, was not only sensitive but hyperæsthetic, while the other limb, hyperæsthetic after the lesion of the pons, became anæsthetic after the second lesion. The hyperæsthesia in the limb on the side of the spinal lesion was as marked as in an animal in which the same section had been made without any previous lesion of the pons.

In another series of experiments, after having divided the right lateral half of the brain at the level of the anterior extremity of the cerebral peduncle, and having found a more or less considerable diminution (and sometimes complete loss) of sensibility in the limbs of the opposite (left) side, he divided the left half of the medulla in two rabbits, and of the spinal cord in six others. He then found hyperæsthesia in the left hind leg, which had previously been anæsthetic, and anæsthesia in the right hind leg, which had been hyperæsthetic. Here, as in the first set of experiments, the second lesion not only removed the effect of the first, but substituted the opposite condition.

If the results of these experiments are compared with the remarkable effects, in which anæsthesia in man, even due to organic disease of the brain, has been cured by the application of galvanic currents, and the interesting observation of the transfer of anæsthesia and hyperæsthesia, published by Charcot, Dumontpallier, Debove, and others, Dr. Brown-Séquard believes that we must reject the notion that the anæsthesia produced by an encephalic lesion necessarily depends on the alteration or destruction either of perceptive centres or of conductors transmitting the sensory impression to these centres. The results of these experiments can, he adds, be readily explained by the views he has previously advanced. Certain parts of the cerebro-spinal centre possess a remarkable power to abolish the functions of other parts of the centre by an "inhibitory" influence. The same parts, or others, possess also another power, hitherto unstudied, by which an irritative lesion may augment the function of other parts more or less distant, by an influence which he terms "dynamogenic." The experimental facts, for instance, may be explained by regarding the anæsthesia as the result of an inhibitory influence exerted upon the sensory elements of the spinal cord, and the hyperæsthesia as the effect of a dynamogenic influence upon the same elements. Other conclusions which he believes follow are—(1) That we have no right to infer from the appearance of anæsthesia, after an encephalic lesion, that the conducting tracts or sensory centres are injured. (2) That in spite of his early observations, which seemed to prove a decussation of the sensory part in the spinal cord, this theory must be discarded. (3) That one-half of the pons suffices to conduct the sensation from both sides of the body.

HEALTH IN SCHOOLS.

WE are anxious that it should be understood by those managers of schools who have already favoured us, or are now sending communications with particulars of the structural and domestic arrangements of their establishments, the dietary supplied to their pupils, the hours allotted to study, recreation, and sleep, together with other matters of interest—that the information supplied will be deemed confidential in so far as the writers may desire that it should be so treated. Our object will be to draw general inferences and cull suggestions from the data supplied; and if it appears expedient, we may ask for such further statements as seem necessary to make our summary of the facts complete. It will greatly help the undertaking if school-keepers and teachers will send their replies at their early convenience. We are prepared to receive communications from schools where boarders are taken from the number of six upwards; and shall be especially glad to be informed on all points relating to the mental and physical discipline of the pupils.

MEASLES FATALITY IN PLYMOUTH.

THE epidemic of measles which has prevailed in Plymouth since the beginning of November last shows no sign of abatement. During the last seven weeks of 1879, 44 fatal cases were recorded within the borough, and in the thirteen weeks ending the 3rd inst., 136 additional cases were registered. Plymouth suffered from severe epidemics of measles in 1871, 1874, 1876, and in 1878, but the epidemic now prevailing is considerably more fatal than any in recent years. During the ten years 1870–9 the annual death-rate from measles in Plymouth averaged 0·71 per 1000 of the estimated population, whereas the average rate in the twenty towns did not exceed 0·51. With reference to this exceptional fatality of measles in Plymouth, it cannot be without interest to consider the evidence which the general mortality statistics of the borough afford of its sanitary condition. During the ten years under notice the average annual death-rate in the borough was equal to 22·2 per 1000, and rose from 22·0 in the first, to 22·4 in the second half of that period. Thus the Plymouth mortality in the last quinquenniad exceeded by 2 per cent. that which prevailed in the preceding five years. This fact becomes the more unsatisfactory when we consider the steady decline which has recently taken place in the mortality of our largest towns. In the twenty large English towns dealt with in the Registrar-General's weekly return, the average mortality during the past five years was lower by 4·7 per cent. than that which prevailed in the preceding quinquenniad. Indeed, if we exclude London, where the decline of mortality has been very slight, the decrease in the nineteen provincial towns was equal to 9·5 per cent. The increased mortality in Plymouth side by side with the large decline in most other towns, deserves the serious consideration of the urban

sanitary authority and of the ratepayers of Plymouth. It may be well to notice another fact which affords evidence of retrogression in the health of Plymouth. Infant mortality, which in the nineteen provincial towns was more than 12 per cent. lower in the last than in the previous five years, showed a decline of but one per cent. in Plymouth. The proportion of deaths under one year, to births registered in Plymouth was equal to 161 per 1000 during the five years 1870—4, while it was 160 in the following five years ending 1879. The extent to which it is possible to control zymotic fatality in urban populations is one of the most important and interesting of sanitary questions, and the unsatisfactory character of recent mortality statistics in Plymouth suggests an intimate connexion between the constantly-recurring measles epidemics in that town and acknowledged defects in its sanitary condition.

THE LATE DR. HEATON.

THE following minute of the Council of the Leeds School of Medicine has been forwarded to us for publication:—"The Council desires to record its deep sense of the great loss it has sustained in the death of Dr. J. D. Heaton, whose valuable services were devoted to the Leeds School of Medicine with untiring zeal for a period of thirty-six years. Dr. Heaton lectured successively upon Botany, Materia Medica, and the Practice of Medicine; and three times occupied the presidential chair. For the last fifteen years he fulfilled the onerous duties of treasurer to the school, in which capacity his mature judgment and watchful supervision conduced very materially to the success of the school. The Council further beg to tender to Mrs. Heaton and her family their deepest sympathy with them in their recent bereavement."

SCHOOLS AND INFECTIOUS DISEASE.

A DIFFICULTY in the way of enforcing the absence from school of children attacked with infectious disease has arisen from the fact that such absence deprives the little sufferers of the prospect of rewards for regular attendance. This difficulty has been met, so far as regards Liverpool, by the energy of Dr. Taylor, the medical officer of health, through whom the question has been brought under the notice of the Liverpool Council of Education. Dr. Taylor has received a letter from Mr. Hance, clerk of the School Board, giving extracts from a communication from the Council, to the effect that such enforced absences would not in future be counted against the children in computing their claim for premiums.

DIABETIC HYPERMETROPIA.

THE ocular complications of diabetes are well-known, and diabetic cataract, retinal hæmorrhages, optic neuritis, and paralysis both of the intrinsic and external muscles of the eye are often met with. Dr. Landolt contributes an article to *El Siglo Medico*, of Madrid, and calls attention to a symptom which has hitherto attracted but little attention. A woman, aged sixty-one, consulted him with reference to her sight. Long vision had always been good, and she had also seen well at a short distance with the aid of glasses, which, however, had now become inefficient. Upon examination he found that she had a hypermetropia of 1·25 dioptrics (= old No. 30), visual acuity 0·5, presbyopia 5 dioptrics (old 8). With these glasses she saw well, so that the change of the sight depended upon a change in the refraction, rather than upon an alteration of the visual acuity. This change had occurred after a fall six months before, and in consequence of which she had suffered from pains in the back and hips, as well as from glycosuria. At the time of consultation there were 229·4 grammes of sugar in 2630 cubic centimetres of urine analysed. The specific gravity was 1040. Fifteen days later the hypermetropia was only 0·75 dioptrics (old 50), and after four months 0·25 (old 156). At the end of five months it had entirely disappeared. The patient had become emmetropic, as before, and had returned to her old glasses. Coincidently with this increase of the refraction the quantity of sugar in the urine diminished, and when the hypermetropia had become 0·75 dioptrics it had disappeared altogether. The author attributes this diminution of refraction (hypermetropia) to the infiltration of sugar into the vitreous humour, in consequence of which the index of refraction is increased, whilst the general refraction of the eye is lessened.

RUSSIAN HOSPITALS.

AT a recent meeting of the Society of Public Hygiene, St. Petersburg, Dr. Andrievsky raised the question of the reorganisation of Russian hospitals, and the adoption of a new method of dealing with the patients sent to them. It appears that the hospitals too frequently contain incurable cases, which might equally well be treated at home, to the serious limitation of the accommodation for cases of acute sickness. He suggests the organisation of a system which would admit of the incurable securing medical care at their own houses. To the objection that many of these cases consist of very poor persons who have sought refuge in the hospitals from their misery, he replies to the effect that the function of the hospital is the relief of sickness and not of pauperism, and that the latter should be otherwise provided for.

A considerable amount of overcrowding is reported in the hospitals of St. Petersburg, owing to the increased demands upon them from the prevalence of infectious diseases in the capital, notably typhus. It is stated, moreover, that from the central hospital bureau, at which persons have to apply for admission, being situated in one of the hospitals, opportunities occur for the dissemination of infectious diseases which should be avoided, and the establishment of an office detached from any hospital is advocated.

HOME FOR FEMALE INEBRIATES.

LORD SHAFTESBURY appeals on behalf of the St. James's Home for Female Inebriates, and the appeal is made in the powerful form of which his lordship is a master when great sins or evils have to be dealt with. The reclamation of habitually drunken women is certainly a very difficult matter, and especially so when the initiatory steps can be taken only with their consent and concurrence. But Lord Shaftesbury tells us that the most apparently incorrigible inebriates have submitted of their own accord to the rigorous, though kind, discipline of this home, and, further, that they are fully aware of the benefits they receive. This is important testimony. But it will need to be made more specific, and much multiplied, to convince us that the law, in its present weak form, will be of much use. We shall be glad to be supplied with evidence on this subject.

FARR TESTIMONIAL FUND.

A MEETING of the executive committee, charged with the raising of a testimonial in honour of Dr. William Farr, C.B., F.R.S., took place on Thursday afternoon. Now that the general election is over, an appeal will be made to the profession, the learned societies, and the public in general, in furtherance of the object in view. A first subscription list will shortly be published.

THE SICK CHILDREN'S HOSPITAL.

THE twenty-eighth anniversary of the Hospital for Sick Children, Great Ormond-street, was held on the 8th inst., at Willis's Rooms, Sir James Paget in the chair. The number of in-patients last year was 1114, of out-patients

12,300. The Convalescent Home in connexion with the institution has received 3302 children during the past ten years. Sir James Paget's appeal on behalf of this excellent charity was characterised by his usual eloquence, and, fortified by remarks from Lord Aberdare, Viscount Gort, Sir R. Wilbraham, the Bishop of Rangoon, Dr. Dickinson, and Dr. Ord, was responded to by the announcement of subscriptions amounting to nearly £2000.

HOWELL v. WEST AND JONES.

THE trial of the action brought by Dr. Howell nominally against the head master and the medical attendant of the Royal Medical Benevolent College at Epsom, for breach of contract in respect to the care and treatment of his son, who recently died of scarlet fever at the school of this institution, not having been concluded at the moment of our going to press, we are compelled to leave over a summary of the evidence, and to reserve comment until next week.

THE LATE DR. SHARPEY, F.R.S.

WE regret to announce the death of Dr. William Sharpey, F.R.S., the well-known Emeritus Professor of Physiology in University College, London. Dr. Sharpey had been residing at Hastings for some months on account of bronchitis, and returned to London about a fortnight ago. He took cold at the beginning of last week, and died, after a few days' illness, on Sunday last, the 11th inst., in his seventy-ninth year. On Thursday afternoon the corpse was taken to University College, where it was met by a large number of distinguished persons, and thence to Euston Station to be conveyed to Arbroath for interment. The *cortège* included about fifty private carriages. We hope to publish a sketch of his long and useful life in our next issue.

A REPORT prevailed in Dublin last week that some uncertainty existed in reference to the validity of Dr. Lyons' election for that city, on the ground that when elected he held an appointment under Government. Dr. Lyons is physician to the Richmond Hospital, for which he receives a salary from the Parliamentary Grant. There seems to be some misapprehension as to the law on this point. Servants of the Crown, with certain exceptions, may sit in Parliament; but the act of accepting an office after election voids the seat. When, therefore, a candidate holds his appointment *before* return to Parliament his election is not affected by it. When a member of Parliament accepts an office under the Crown he is disqualified, but may seek re-election and sit on a new return, as is the practice with members of the Government.

A TABLET in memory of Surgeon-Major Shepherd, who was killed at Isandula, has recently been placed in the Church of Leochel-Cushnie. The tablet, which was prepared by Messrs. Macdonald, Field and Co., Aberdeen, is of oblong shape, and is exceedingly tasteful in design. It bears in neat lettering the following inscription:—"In memory of Peter Shepherd, M.B., University of Aberdeen, Surgeon-Major, Her Majesty's Army, born at Craigmill, in this parish, on 25th August, 1841, who sacrificed his own life at the battle of Isandhlwane, Zululand, on the 22nd January, 1879, in the endeavour to save the life of a wounded comrade. Erected by his friends and brother officers."

AT a recent meeting of the board of guardians of St. George's, Hanover-square, a letter was read from the Commissioners in Lunacy in reference to the want of asylum accommodation for lunatics in the county of Middlesex. In the event of the county asylums and licensed houses being reported as full, the Commissioners fear that accommodation will scarcely be found nearer than the Northampton County Asylum. They agree with the guardians of St. George's Union in thinking that many cases exist in all three asylums for Middlesex of old demented people and others who would be properly taken care of in well-regulated workhouse infirmaries. The discharge of such patients is a matter which would probably be best secured by regular visits of a committee of guardians of every union to the asylums. They should take with them their own medical officer (16 and 17 Vic., cap. 97, sec. 65), and confer with the medical superintendent as to the suitability of particular cases for treatment out of an asylum.

THE Board of Trade inquiry into the formation of banks at Barking and Crossness, alleged to be caused by the outfalls of sewage, and to be obstructive to navigation, has now terminated, having occupied twenty-five days. Sir Charles Hartley sat as umpire, and Mr. F. J. Bramwell and Captain Galton as arbitrators, the latter for the Thames Conservancy Board, and the former on behalf of the Metropolitan Board of Works. After hearing the reply of Mr. Pope, Q.C., on behalf of the Thames Conservancy Board, the umpire said he and the arbitrators would, after having carefully weighed all the evidence, report, if possible jointly, to the Board of Trade.

AT a meeting of the Board of Guardians of St. Albans, attention was called to the excessive mortality among infants during the past year in the sanitary district, as shown by the report of Dr. Saunders, medical officer of health. At Tring the death-rate of infants under one year of age was reported to be 140 per 1000. The matter was referred to Dr. Saunders for further report.

DR. TIDY, analyst for Essex, whilst reporting favourably of the food sold in the county as regards its genuineness, echoes an objection made by other analysts as to the method of purchasing samples. He thinks more satisfactory results would be obtained if private individuals exhibited a greater interest in the efforts made to put a stop to food adulteration.

WE understand Mr. Lister, F.R.S., has consented to preside at the annual distribution of prizes at the Bristol Medical School, on Monday, May 3rd, at 4 P.M. On that day he will also give a demonstration at the Royal Infirmary; and on Tuesday, May 4th, another at the Bristol General Hospital, at twelve o'clock.

THE twenty-seventh report of the Charity Commissioners for England and Wales contains some very strong observations by the Commissioners, deprecating investments on mortgage by charity trustees, and advocating the placing of funds affected by a charitable trust in Government securities.

MR. JOHN BRIGHT, M.P., has been nominated as the next Liberal Lord Rector of Glasgow University, and the right hon. gentleman has intimated his acceptance of the nomination. The term of office of Mr. Gladstone, the present Lord Rector, will expire in November next.

WE learn from the Russian journals that H. E. Count Orlof-Davydow, who is a graduate of the University of Edinburgh, having appeared for the purpose before the British ambassador, acting as a justice of the peace, has recorded his vote in favour of Professor Lyon Playfair.

THE post of Honorary Surgeon to Her Majesty the Queen in India, vacant by the death of Surgeon-General Arnott, C.B., has been conferred upon Surgeon-General Hunter, M.D., Bombay Medical Department.

SIR WILLIAM JENNER, Bart., will take the chair at the twentieth festival dinner of the Royal Medical Benevolent College, to be held at the Langham Hotel on the 28th inst.

DR. W. B. CARPENTER, the representative of the University of London in Firth College, Sheffield, has resigned his position owing to ill-health.

SURGEON-MAJOR J. M. CUNNINGHAM has been appointed Surgeon-General in medical command in India, in succession to Dr. Beatson.

THE district medical officer has reported an increase in the number of cases of whooping-cough at the Norwood parish schools.

MR. G. PIZEY, M.R.C.S., of Clevedon, has, says the *Bristol Mercury*, been stricken with paralysis.

A MEDICO-SANITARY PILGRIMAGE TO MECCA.

THE veil which has hitherto shrouded the sacred city of Mahommedanism from the familiar knowledge of the unfaithful is being withdrawn, and that in a manner and after a fashion which was unlooked for. The function of adventurous travellers, such as Burckhardt, Burton, and Maltzan, so far as it concerns the central spot of the Mahommedan world, will presently be at an end, and we have promise of becoming early acquainted with the innermost recesses of the sacred city, habits of life of its population, and proceedings of the pilgrimage, from the pens of Mahommedan writers themselves. It is no new thing that the faithful should commit to paper an account of their pilgrimage, as in the instances of the Nawab Sikander Begum of Bhopal, and Hafiz Ahmed Hassan, but their descriptions have been looked upon by the unfaithful rather as literary curiosities than as helpful to that knowledge of Mecca and its sister city in holiness, Medina, which the Christian of the "special correspondent" epoch craves for. But a different sort of author has now entered the field of letters, the English-speaking Mahommedan, cultivated in Western medicine, and capable of judging of the events of the pilgrimage, and of the place to which it is directed, in other than their religious aspects. How this has come to pass is not the least interesting part of the story.

When, in 1865, cholera, radiating from Mecca, spread for the first time in the history of that disease by way of the Red Sea into the basin of the Mediterranean and into Europe, the governing Powers of the Continent discovered that under the altered and altering relations of the traffic with the East by way of Egypt, and its increasing acceleration, the pilgrimage had become a great danger to the Continent, and the holy land of the Hejaz a sort of half-way house for cholera in its migrations by the sea route from India. An International Sanitary Conference held at Constantinople in 1866 formulated certain notions as to this newly-ascertained danger, and each subsequent pilgrimage to Mecca has been carefully watched by the Powers on the Mediterranean littoral in view of cholera or plague, and elaborate measures have been instituted by the Ottoman and Egyptian Governments, the governments most immediately concerned, for the sanitary regulation (much needed) of the pilgrimage, and the arrest (if practicable) of any threatened extension of disease by the returning pilgrims from the sacred cities and the Hejaz. Every year since 1865 a medical Commission has been despatched from Constantinople to the Hejaz to regulate and amend the sanitary conditions under which the rites of the pilgrimage have to be performed there, and generally to give such medical assistance as may be needed by the pilgrims. An Egyptian medical man is attached to this Commission, and its proceedings appear to be reported at the close of each pilgrimage to both the Ottoman and Egyptian Governments, but the report is not made public. The Mahommedan population of India under British rule contributes a large proportion of the pilgrims who each year make the pilgrimage, and we learn from Captain Burton, and more recently from his wife, Mrs. Isabel Burton,[1] that India is one of the chief contributors of impoverished pilgrims to the pilgrimage. India, moreover, as the "home of cholera," is looked to as the prime source of danger from that disease; and although she led the way in endeavouring to subject the pilgrims and the pilgrimage, so far as this fell within her power, to sanitary regulation, she is not regarded either by the Ottoman or the Egyptian Governments, nor generally it may be said by the Governments of the Continent, as represented at the Constantinople Conference of 1866, as having done all she might have done to diminish the chances of the spread of cholera from her shores in the track of pilgrims bound for Mecca. There would appear to have been a sort of simmering discontent with India in this matter since 1866, and at length the Government of India has taken the course of despatching a medical commissioner to Mecca, to report upon the sanitary relations of the pilgrimage, more especially as it concerns British Mahommedan subjects.

In the autumn of 1878 Assistant-Surgeon Abdur Ruzzack, a Mahommedan gentleman in the Indian Medical Service, was directed to visit Mecca, and to study the whole circumstances of the pilgrimage—at the starting-point from an Indian seaport, on the voyage out and home, during the journey in the Hejaz, the stay in Mecca and Medina, and during also the rites of the pilgrimage. This he did; and in the course of last year he reported fully on the subject, adding to his report a series of detailed recommendations for the better regulation of the pilgrimage as affecting British Indian Mahommedan subjects. The report, written in excellent English, is admirable from the acute and comprehensive observation it displays. It presents us for the first time with an adequate account of the sanitary circumstances under which the pilgrimage is performed and the sanitary condition of the sacred cities of the Hejaz; and, apart from this, it is of considerable value for its description of the rites of the pilgrimage. There would appear, from the report, to be no doubt that the Government of India is really not so careful as she might be of our Mahommedan fellow-subjects in pilgrimage, and that she has been less heedful of the fears of the Ottoman and Egyptian Governments and other Powers of the Mediterranean littoral than was to be desired. Abdur Ruzzack shows that she has left numerous things undone, for the better regulation of the pilgrimage, which she might be reasonably asked to do; and he effectually does away with the objection that further interference with it is undesirable, lest such interference should arouse religious prejudice.

Abdur Ruzzack arranges his recommendations, first, (*a*) with reference to the pilgrim previous to embarkation, and (*b*) after his embarkation, and during the voyage: and next, (*a*) with reference to the arrival at Jeddah and the journey to Mecca; (*b*) with reference to the stay at Mecca, and the journey during the rites to Arafat and Mina; and (*c*) with reference to the journey to Medina and back. On each of these subjects he has much to say, but we may not do more than touch upon a few salient points. He proposes that the pilgrim should not be permitted to embark until he has been examined as to his health by a health officer, and until he has given evidence of possessing sufficient means at command to meet the costs of the pilgrimage. It is difficult to over-rate the importance of these recommendations. The first would remove the objection strongly urged by the Conference of 1866 regarding the omission by the Indian authorities to give heed to the state of health of pilgrims before embarkation—an omission which was held to neglect the one safeguard needed to prevent the embarkation of persons in an early stage of cholera. The second recommendation would put a stop to persons entering upon the pilgrimage who were simply religious mendicants, and who form one of the great difficulties in regulating the sanitary conditions of the pilgrims in the Hejaz.

Abdur Ruzzack further recommends the establishment of a complete system of agencies and registration by which the course of the pilgrim could be regulated from the time of his embarkation in India to the time of his landing on his return home, and by which he could be protected from the frauds of self-constituted agents both before embarkation in India and during his stay in the Hejaz. A system of this kind

[1] Arabia, Egypt, India, 1879.

appears to be in force among the Javanese pilgrims, and is said to work exceedingly well.

Notwithstanding what has been done for the regulation of the pilgrim-traffic from Indian seaports, much more, it appears, remains to be done in regard to the overcrowding of the pilgrim-ships; and Abdur Ruzzack shows fully what is further required in this respect.

Among the most important of his recommendations in this connexion, are those relating to the medical supervision of the pilgrimage. He would have a Mahommedan medical officer attached to each pilgrim-ship (forbidding pilgrim-traffic in ships of small tonnage); would establish a hospital at Jeddah during the pilgrimage, and attach to it a Mahommedan medical officer, who might also act as pilgrim-agent and assistant to the British Consul, and when the pilgrims move to Mecca would take medical charge of them there, leaving a substitute at Jeddah. The Mahommedan medical officers of the different ships, as they arrive, would be placed in charge of caravans bound for Mecca and Medina, and they would act as a medical staff under the agent during the rites of pilgrimage. There can be no question whatever of the necessity for this recommendation being acted upon, and of its feasibility; and we apprehend that in regard to the question of expense, the whole Mahommedan population of India would be glad to co-operate with the Government of India in promoting a scheme which is so completely in accord, as it would appear, with their religious teachings, and which is so obviously to be desired in the interest of their co-religionists.

That this remarkable report will exercise an important influence upon the action of the Government of India in this matter can scarcely be doubted; and we trust to learn that its author has or will shortly receive some special mark of honour for the mode in which he has performed a difficult and delicate duty.

HEALTH OF LARGE ENGLISH TOWNS.

FOURTEENTH WEEK OF 1880.

URBAN mortality showed a marked decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population in England and Wales, 6021 births and 3239 deaths were registered last week. The births exceeded by no less than 836, while the deaths were 36 below, the average weekly numbers during 1879. The deaths showed a decline of 339 from the number returned in the previous week, and were equal to an annual rate of 22·5 per 1000, against 21·9 and 24·9 in the two preceding weeks. During last quarter the death-rate in these towns averaged 25·5 per 1000, against 24·2, 25·2, and 27·5 in the corresponding periods of the three years 1877–8–9. The lowest death-rates in the twenty towns last week were 16·9 in Leicester, 17·2 in Leeds, 17·5 in Portsmouth, and 18·5 in Brighton. The rates in the other towns ranged upwards to 26·2 in Oldham, 28·6 in Manchester, 28·6 in Norwich, and again the highest rate, 31·3, in the borough of Plymouth. The excessive rate in Plymouth continues to be mainly due to the exceptional fatality of measles.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 424 and 531 in the two previous weeks, were 449 last week. They included 143 from whooping-cough, 112 from measles, 89 from scarlet fever, and 41 from fever, principally enteric. The annual death-rate from these seven diseases averaged 3·1 per 1000 in the twenty towns, and ranged from 0·7 and 1·0 in Wolverhampton and Brighton, to 6·3 in Oldham, 7·2 in Nottingham, and 13·2 in Plymouth. The largest proportional fatality of measles occurred in Plymouth, Nottingham, Hull, and Oldham; of scarlet fever in Salford; and of whooping-cough in Manchester. The 16 deaths from diphtheria in the twenty towns included 11 in London and 2 in Birmingham. Six more deaths were referred to fever in Sheffield, against 4 in each of the three previous weeks. Small-pox caused 15 more deaths in London and its suburban districts; but no death from this disease was recorded in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 167 and 172 in the two preceding weeks, further rose to 177 on Saturday last; 42 new cases of small-pox were admitted to these hospitals during last week, against 31 and 47 on the two previous weeks. The Highgate Small-pox Hospital contained 18 patients on Saturday last.

The fatality of lung diseases showed a considerable decline in our urban population last week. The deaths referred to diseases of the respiratory organs in London, which had been 315, 334, and 395 in the three preceding weeks, declined again to 365 last week, and were 91 below the corrected weekly average; 219 resulted from bronchitis, and 103 from pneumonia. The annual death-rate from diseases of this class was equal to 5·2 per 1000 in London last week; in Liverpool the rate from the same diseases was 6·0 per 1000.

FEES AT THE COLLEGE OF SURGEONS.

FOR some time past, as we have more than once announced, a Committee of the Council of the Royal College of Surgeons has been considering the best means of giving effect to the principle adopted by the Council about a year ago of requiring candidates who have been rejected at any examination of the College, to pay, on re-examination, such fees as will cover the expenses of the re-examination. The Committee presented its report at a meeting of the Council held on the 11th ultimo, and at a meeting held on the 8th inst. the adoption of the report was confirmed. It may, however, be well to state that the proposed changes cannot be put into force until the Secretary of State has sanctioned the necessary alterations in and additions to the bye-laws. The following are the regulations relating to the payments by candidates from the membership and fellowship.

"For the Primary Membership Examination the fee shall be five guineas, or, if it be the re-examination of a previously unsuccessful candidate, three guineas; and the fee shall not be returned to a candidate who fails to pass the examination or re-examination. For the Final Examination or re-examination the fee shall be fifteen guineas, over and above all charge for stamps; and ten guineas shall be returned to a candidate who fails to pass the examination or re-examination.

"The fees to be paid for admission to the Fellowship by examination, over and above all charge for stamps, shall be as follows:—(*a*) for members of the College, if succeeding on their first examinations, fifteen guineas; but with liability to higher payment (as hereinafter provided) in cases where re-examination is required; (*b*) for persons not members of the College, thirty guineas.

"Of the above respective amounts, one-third part shall be paid before admission to the Primary (or anatomical and physiological) Examination; and the remaining two-thirds, together with the charge for stamps, shall be paid before admission to the Final Examination.

"Of the fee of five guineas to be paid by members of the College before they are admitted to the Primary Examination, no portion will be returned to unsuccessful candidates; but of the fee of ten guineas to be paid by persons who are not members, half will, in case of rejection, be returned. Of the fee of ten guineas to be paid by members of the College before they are admitted to the Final Examination, no portion will be returned to unsuccessful candidates; but of the fee of twenty guineas to be paid by persons who are not members, half will, in case of rejection, be returned. And in all cases any money which has been prepaid as a charge for stamps will be returned to rejected candidates.

"Candidates who, having failed at an examination, subsequently desire re-examination, are, on each such occasion, subject to the same conditions regarding payment as those on which they were first examined: except that in all cases previous payments shall be taken into account, and that, if in any case a total payment of thirty guineas for the Fellowship has been made, no further payment shall be required."

ST. JOHN AMBULANCE ASSOCIATION.—On the 8th inst., at the Mission Hall, Princess-street, Wapping, Mr. John Furley, of the Order of St. John of Jerusalem in England, presented certificates to the pupils who had, out of the class recently closed in the district, satisfied the surgeon examiner (Dr. H. Crookshank) of their capability of rendering first aid to injured persons.

Correspondence.

"Audi alteram partem."

ON A NEW METHOD OF EXCISING THE KNEE-JOINT.

To the Editor of THE LANCET.

SIR,—The somewhat unsatisfactory result which, in a considerable proportion of cases, follows excision of the knee, as regards the position of the limb and its firmness as a support, especially in those instances where the patient is not kept sufficiently long under observation, has suggested to me the desirability of some modification in the mode of operation now commonly employed.

In some cases there is, from the first, a tendency for the tibia to become displaced backwards upon the femur, whereby the area of apposition of the two bones is lessened, and consequent diminution in the strength of the union is produced, as well as unnecessary unsightliness of the limb. In other cases bending of the limb occurs after a certain amount of consolidation has taken place, and consequent weakness, deformity, and shortening are produced, as well as an inequality of strain—a portion only, instead of the whole, of the divided area bearing the pressure of the body-weight, and hence the part upon which the undue proportion of pressure comes is more likely to become the seat of a fresh outbreak of the disease.

To remedy these defects I would suggest trial of the following operation, which has not, so far as I am able to learn, been yet employed. I have not yet had an opportunity of seeing its results, but the operation itself I have found presents no particular difficulty upon the dead subject, and would, I believe, be still more easy upon the living, where the ligaments have been relaxed and more or less destroyed by pulpy infiltration.

A transverse incision, as in the ordinary operation, should be made across the knee just below the apex of the patella, but should be carried only through the skin and subcutaneous structures. The joint should then be opened at the sides, leaving the ligamentum patellæ intact. The capsule of the joint and the interarticular ligaments or their remains having been divided, the thigh should be flexed upon the abdomen to relax the rectus muscle, and the leg being either extended upon the thigh or flexed to such extent as to allow of easy manipulation, the saw should be introduced between the ligamentum patellæ and the tibia at such distance above the tubercle of the tibia as the disease may require, the section being made from before backwards. The slice of tibia having been removed, the necessary amount of the femur should next be sawn off in a similar manner; to facilitate this it is well to partially divide the aponeurosis attached to the sides of the patella, in a direction parallel to the long axis of the limb. The patella may then be readily turned round, so that its articular surface is exposed, and this should be removed by a horizontal section exactly in the same way as it is in Gritte's amputation. The next step consists in removing with chisel or saw a small portion of the anterior surfaces of the tibia and femur to which the refreshed surface of the patella should be adjusted, and the rest of the operation concluded in the ordinary way. In order to keep the bony surfaces in apposition, an apparatus made on the plan of a small Lister's or a Signoroni's tourniquet may be applied, the one pad resting on the splint at the back of the limb, and the other pressing lightly but firmly upon the patella; this, of course, would be put on after the dressings are in place.

By this means a continuous, as it were, anterior splint of bone and tendon is preserved on the front of the limb, and the patella by its union with both bones forms a bony arch across the fissure left between the tibia and femur; at the same time the tendency of the hamstring muscles to draw the tibia backwards is counteracted by the preservation of the extensor tendon.

Even supposing that no bony union were to take place between the patella and the other two bones, still, the presence of the bone and tendon would add greatly to the strength of the limb. Further, the quadriceps would still be enabled to act in bringing forward the limb in walking; also the appearance of the limb would be improved by the presence of the patella, by avoidance of the atrophy of the muscles on the front of the thigh resulting from their disuse as a consequence of the division of their tendon.

The most useful saw for the operation will, I think, be found to be a Butcher's saw, the blade of which should be passed beneath the ligamentum patellæ, or quadriceps tendon, as the case may be, and then adjusted in the bow; or in default of this a narrow Spence's saw with movable back may be employed.

No difficulty will, I think, be found in removing all diseased tissue that may be necessary, and although the operation takes somewhat longer time in its performance, it seems probable that it would give improved results.

I remain, Sir, yours, &c.,

G. A. WRIGHT, F.R.C.S.

Royal Infirmary, Manchester, March, 1880.

A MEANS OF DIAGNOSIS OF RENAL CALCULUS.

To the Editor of THE LANCET.

SIR,—At the conclusion of the recent debate upon my paper on "Nephrectomy," at the Royal Medical and Chirurgical Society, I had intended to draw attention to a method of diagnosing calculus in the kidney, which had rendered me the greatest service in a case treated since the writing of the paper. Having, however, omitted to do so then, I venture to think that recording the matter here may be of use to others in dealing with a class of cases beset with difficulties in their earlier stages as to diagnosis, and with dangers later on. The following brief notes of a case will illustrate the point sufficiently.

At the beginning of February my colleague, Dr. John Williams, very kindly transferred to my care at University College Hospital a woman whom he believed to be suffering from some renal tumour, a view which I also adopted on hearing the history, and on manual examination. But the question as to the nature of the tumour presented many difficulties. The symptoms had only developed comparatively recently—i.e., some three or four months before; the morbid mass was not very large, was movable and nodulated; it was painful on handling, and felt to be particularly hard. There was pus in the urine, but never any blood. To be brief, the diagnosis appeared to lie between: (1) a new growth of the kidney; (2) tubercular infiltration of the renal tissue; (3) a calculus in the organ. In the hope of distinguishing between these three conditions I adopted the following measures on Feb. 21st:—

The patient was put under chloroform to admit of more thorough examination of the tumour. This showed it more than ever to be renal. I then took a long, slender aspirator needle, carefully cleansed, and forced it into the loin at a point midway between the crest of the ilium and last rib, directing the point towards the abdominal aspect of the spinal column, and a little upwards. At the same time the tumour was pressed backwards towards the needle by the hand on the abdomen. The vacuum (previously made) having been turned on, the needle was thrust steadily on into the tumour, and, at about two inches from the skin surface, came upon a calculus. The point could be almost heard grating on the stone, and the grating could, it was believed, be felt by the hand on the tumour in front. Only about two drachms of thick, yellow, and odourless pus came away in the aspirator. The diagnosis was thus rendered certain. But had the tumour been a new growth or tuberculous, I had hopes that enough débris would have come away in the instrument to enable us to judge of its nature, as in the case of growths in other situations.

The withdrawal of even this small quantity of pus seemed to benefit the patient. The pain was relieved, the temperature fell, and she felt better for the next few days. No blood was noticed in the urine afterwards.

In view of the rapid wasting, loss of strength, and suffering, and the hopelessness of the case if left to itself, I proposed to cut down and remove the kidney. The patient, however, declined any operation, and returned home a few days later. That removal of the organ in this case, before abscesses had formed around it, and the patient was altogether exhausted by the disease, would have been the proper treatment I am still satisfied. It would, I believe, have been less dangerous than simple removal of the calculus by

incision into the kidney through the loin, with all its later risks.

The point indicated for puncture will always find the lower end of the kidney as verified by dissection beforehand. It appears strange that this almost obvious method of diagnosing stone in the kidney early should not have been employed before this, though aspiration of hydro- and pyonephrosis and peri-renal abscess is common. But though so simple, there appear to be no records, so far as I have found in a rather extensive examination of the subject, that it has been made use of.

I am, Sir, yours obediently,

ARTHUR E. BARKER, F.R.C.S.I.,
Assist.-Surgeon and Assist.-Professor of Clinical Surgery, at University College Hospital.

Welbeck-street, W.

CHRONIC MENINGITIS WITH OSSEOUS DEVELOPMENT IN THE DURA MATER.

To the Editor of THE LANCET.

SIR,—The following case, from the length of its duration, and several other particulars, seems to me worthy of publication.

On Dec. 29th last, at about 2 P.M., I was sent for to see the body of a man (H. W——, aged forty-nine) who was last seen alive at about 10 A.M., and was found dead in his room two hours afterwards. As the consequence of this I subsequently made a post-mortem examination, and, never having seen him alive, I shall give the particulars of that examination first.

There was nothing to note externally, excepting the appearance of an old fracture of his nasal bones. The space between the brain and its membranes was occupied with a considerable amount of serum; the left lateral ventricle contained about one ounce and a half, and the right about half an ounce, of clear fluid; there was no effusion of blood in any part of the brain; the arachnoid was thickened and opaque, and inseparable from the pia mater in places, chiefly in the median line over the longitudinal fissure: lying deep in the latter, attached to, and embraced on either side by, the falx cerebri, was a small plate of bone, about one inch in length and a quarter of an inch in breadth, convex on its upper, straight and dentated on its lower margin; there was no irritation or lesion of any kind visible in its immediate neighbourhood. I could find no traces of disease in any of his thoracic or abdominal organs, the kidneys in particular being quite healthy. And now for his previous history, which I have subsequently learnt.

From ten years of age he had been subject to epilepsy. The attacks recurred for the first few years at intervals of from one to two months, until during the last six years he had them every fortnight or every week, and at last twice a week, the longest interval that he ever enjoyed being, for one period only, three years. He appears never to have done any work, and to have been quite well between the attacks until the last five or six years. During this latter period he had symptoms of cerebral irritation, especially for a day or two before the fit would come on, even threatening to kill those around him. He never had any form of paralysis other than a certain want of control over his bladder. He was always somewhat drowsy, sullen, and irritable. There is an entire absence of any history of epilepsy or cerebral disease in the family.

I am, Sir, yours truly,

Tunbridge Wells. W. M. SATCHELL.

ALGIERS AS A HEALTH RESORT.

To the Editor of THE LANCET.

SIR,—In THE LANCET of the 20th ult. I have read a letter of my friend, Dr. Lockhart Robertson, in which he comments very severely upon the unwholesome sanitary condition of the town of Algiers, and compares it very unfavourably in that respect with the towns upon the Riviera. I would be the last to pretend that the sanitary arrangements in Algiers were anything like perfect, for, more especially from the great drought which has existed for the last two years, also from the imperfect system of water-closets in general use by the French both here and in France, bad smells are only too common here as elsewhere on the Continent. Still, I cannot help thinking that Dr. Robertson has exaggerated his description. During this winter about 1000 English visitors have passed a longer or shorter time in the hotels here of which he complains so much, not one of whom has suffered from typhoid fever, a result at the present time, when that disease seems rife both at home and abroad, which can compare very favourably with the returns from other places of health resort; nor have I ever seen any cases of illness in these hotels the cause of which could be directly attributed to the effects of sewer gases. The few cases of typhoid fever which have occurred here this winter, to which Dr. Robertson refers, have almost without exception been confined to the suburbs of Mustapha Supérieur; of these five came under my care, and in two of them there was distinct evidence of the fact that the patients had been attacked by the disease before their arrival in Algiers.

I have had considerable experience in the unpleasant degrees of smells of nearly all the different marine health-resorts upon the shores of the Mediterranean, and I can most unhesitatingly award the palm for intensity to some of the most celebrated ones upon the opposite side, which it might be invidious to name. Trusting that you may find space in your journal for this,

I remain, Sir, yours, &c.,

Algiers, April 3rd, 1880. W. THOMSON, M.D.

THE CROTON-OIL TREATMENT OF RINGWORM.

To the Editor of THE LANCET.

SIR,—May I be allowed a word in reply to Mr. Smith's letter in reference to the croton-oil treatment of ringworm, in THE LANCET of last week, as he appears to have misunderstood a sentence in my paper on this subject in THE LANCET of March 27th.

I did not say that kerion is a subcutaneous abscess, but that the production of either kerion or subcutaneous abscesses is unnecessary.

A pustule will clear of ringworm only an area as large as comes under the influence of the inflammatory process. A rash of scattered pustules may fail to free of ringworm the affected part, if spaces beyond the sphere of their action exist between the pustules. I have often seen diseased hairs reappear in such interpustular spaces. It is necessary, therefore, that the pustules be in close propinquity and deeply seated.

In my experience a close-set pustular rash, involving the tissues to the depth of the hair-follicles, produces all the good effects of a more far-spreading and severe inflammation. Some inflammatory infiltration accompanies such a rash, and the hairs are loosened.

As regards the principle of treatment, the all-important point, Mr. Smith seems to agree with me. I did not for one moment suppose that Mr. Smith was aware that I had previously brought the matter before the profession.

I am, Sir, your obedient servant,

WYNDHAM COTTLE, M.B. Oxon., F.R.C.S.,
Assistant Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

Savile-row, W., April 10th, 1880.

DISLOCATION OF THE ASTRAGALUS (SIMPLE).

To the Editor of THE LANCET.

SIR,—Cases of this nature are so rare and often so little amenable to treatment that it is worth while to record one that had a favourable termination.

A young man, aged nineteen, tall and active, when engaged in athletic sports, in taking a leap, got his foot fixed in the ground and fell forwards. Dr. Carter, who was near at hand, saw him immediately, and, finding that there was dislocation of the astragalus, attempted, with other assistance, to reduce it by direct extension, but without success. When I saw him about an hour afterwards I found the foot presenting an appearance of truly formidable distortion. The toes were turned outwards. The distal head of the astragalus formed a marked prominence on the inner aspect of the foot, with the integuments tightly stretched over it. Immediately beneath the inner malleolus was a deep depression corresponding to the normal situation of the displaced bone. The heel was drawn back, and the tendo

Achillis tightly strained. On the outside the external malleolus projected in a very marked manner, the skin being here also tightly strained over it. The dislocated bone was quite immovable.

Chloroform having been administered, a round towel with a clove-hitch at one end was passed over the heel and across the instep. To the other end pulleys were attached, and counter-extension made over the pelvis. After a few minutes' extension the bone slipped into place with an audible click, and with the effect of at once removing all the distortion which had previously been so marked.

The after-treatment was of the simplest kind, and the patient rapidly recovered with a useful and undamaged limb.

In the process of reduction I had the benefit of the co-operation of Mr. Stockwell, Dr. Carter, and Mr. Scott, our house-surgeon.

I need scarcely say the result was highly satisfactory, as the distortion was extreme, and the prospect of replacing the bone apparently very problematical.

I am, Sir, your obedient servant,

Bath, March, 1880. R. T. GORE.

TRICHINOSIS v. ENTERIC FEVER.

To the Editor of THE LANCET.

SIR,—Having read your article, "Trichinosis *v.* Enteric Fever," I would suggest that the temperature charts of the best-marked cases of trichinosis should be published, as these might afford a valuable guide to the differential diagnosis of these diseases in the future.

I am, Sir, yours, &c.,

PYREXIA.

EDINBURGH.

(*From our own Correspondent.*)

IN hospital Dr. John Duncan has had two cases of lateral lithotomy. One of these, performed in the Glasgow method with the rectangular staff, presented some difficulty, for the extreme narrowness of the pelvic outlet and the large size of the stone hindered extraction. The patient is doing well.

Dr. Keith's series of successful consecutive ovariotomies—over eighty in number—has been interrupted by a death. This occurred in a case where operation had been performed as a last resort, at the earnest solicitation of the patient's relatives. In the wards in the Royal Infirmary there have been two interesting operations of late—one for removal of a large fibro-cystic tumour over forty pounds in weight, and another where a large single cyst with many adhesions burst during the operation. It is to be hoped the managers may attend to the further illumination of the great theatre, so that Dr. Keith may again give pleasure and instruction by operating publicly. It is also a matter of doubt whether there is any advantage derived from the use of the two clinical theatres as operating rooms. Formerly in the old Infirmary a student might see various surgeons at work after one another in the same arena; he might enter at the commencement and leave at the conclusion of any operation he felt a special interest in; now, however, in the new building he is perplexed sometimes by seeing three operations advertised. Each of these is carried on in a separate theatre, but all takes place at the same time. He cannot conveniently see them all, as he might have done had old customs been adhered to; he must take his choice of one, and one only. The system may be more convenient for the surgeon; it does not seem to be better for the student, and is apt to lead to the establishment, as it were, of three or more small schools, under one common roof, each following its own leader.

A third house physician will be appointed to the University clinical wards, and the junior house surgeon will become resident after the month of October.

Following the example of the University, the resident physicians attached to the extra-mural medical wards will, in future, be selected by competitive examination.

THE salaries of the district medical officers of St. Pancras have been increased as follows:—Dr. Thomas Sayer's, from £100 to £140 per annum; Dr. Walter Smith's, from £100 to £130; and that of Mr. Sydney L. Smith, from £130 to £140.

Obituary.

ALFRED LEGGATT, F.R.C.S. ENG.

BY the death of Mr. Leggatt the profession and society have alike lost a practitioner of no common order. The profession has lost a member who sustained its dignity, upheld its honour, and exemplified its best characteristics with singular fidelity and success; and society, in its highest walks, has lost a trusted, able, and conscientious medical adviser, whose death has left a void scarcely likely, in some instances, to be adequately filled.

For over thirty years Mr. Leggatt enjoyed a practice in the most aristocratic quarter of the metropolis such as seldom falls to the lot of any man; and he retained it as only a man of ability and high character could do. His practice was extensive and lucrative, being almost exclusively among the upper classes. He enjoyed the confidence of Cabinet Ministers of both parties, and was the trusted medical adviser of some of the most distinguished personages in the State.

Of singularly fine presence and gentle manners, he had also the charm of honest purpose; for the uprightness of his mind shone through all his acts. Of him may be said that which can be truthfully said of very few, that he lived what he professed—a Christian life. Such as his belief was, he faithfully strove to live up to it; and it can truly be said of him that his life was one of unobtrusive and gentle piety.

Mr. Leggatt's practice, like that of the majority of general practitioners, was chiefly medical and obstetrical, with very little surgery. For such work a medical qualification would have appeared the most appropriate leading licence, but, like so many others who are never called upon to practise surgery after acquiring their licence, he only held the M.R.C.S., and after that the L.S.A. A few years ago, however, the honorary F.R.C.S. Eng. was conferred upon him; and no one more truly merited a distinction than he whose blameless life had brought honour to his calling.

Mr. Leggatt was a good, but kindly, judge of men; and it may be mentioned in illustration that two of his old assistants who lived with him when quite young men, are now Fellows of the Royal College of Physicians of London and teachers in Metropolitan Schools of Medicine—viz., Dr. B. Yeo of King's College and Dr. Wiltshire of St. Mary's. Mr. Leggatt leaves a widow and large family to mourn his loss. He died at the age of sixty-five, after a laborious and successful life.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at Meetings of the Board of Examiners on the 8th, 9th, 12th, 13th, and 14th inst.:—

Edward D. Thring, William H. Horrocks, Charles R. Elgood, Ernest Hudson, William C. Wilkinson, William R. Buckell, Frederick J. Bolles, and Francis F. Culhane, University College; George Frost, John B. Sutton, Hugh R. Nesbitt, John F. McMillan, Edgar R. Dimsey, William E. Ransom, M. W. Russell, Walter E. Wynter, Alan E. Tate, J. H. Douty, William Hern, Charles G. Brodie, and Sidney R. Dyer, Middlesex Hospital; Frederick L. Nicholls, William C. Beatley, William Tibbles, James Donald, John L. Rodwell, David L. Jones, James K. Lewis, and Samuel Wyborn, Charing-cross Hospital; William A. W. Smith, Percy Pope, Arthur F. G. Codd, Percy Edgelow, and George Y. Eales, St. George's Hospital; Henry F. Ilewiez, Robert F. Fox, Michael Angelo, Robert Black, Oliver W. Sharood, John H. Thomas, John Sinclair, George Adkins, John C. Davies, Frederick H. Kenny, William Coates, Walter F. Dale, Ralph Holyoake, R. Baksh, and John W. Davis, London Hospital; Thomas D. Fryce, James Berry, Edward J. Jenkins, R. J. Collyns, D'Arcy Power, and Alfred J. Anderson, St. Bartholomew's Hospital; Harry L. R. Dent, Robert G. Lynam, Hugh R. Beevor, James J. C. Dounet, John W. G. Kealy, Sidney Ellis, and Walter T. Brooks, King's College; John H. H. Williams, Louis A. Dunn, Charles H. L. Meyer, and John H. Booth, Guy's Hospital; Oliver F. N. Treadwell, Arthur Goulston, Walter Hull, and David W. H. Llewellyn, St. Thomas's Hospital; John R. Cater, St. Mary's Hospital; Joseph Pollard, Cambridge and King's College; Edward A. G. Doyle, Westminister Hospital; S. T. Prues, Francis J. Walker, Harold Hendley, and H. E. Bateman, St. Bartholomew's Hospital; Frederick Knight, Edward Skipper, Edward W. Von Tunzelmann, and Frederick H. Lane, University College; G. D. Porter and Bertram H. L. Stivens, King's College; Henry Green and Alfred H. Willoughby, St. Mary's Hospital; Robert Sanderson and Gilbert E. Butler, Westminister Hospital;

Llewellyn A. Morgan, St. Thomas's Hospital; William B. C. Treasure, Charing-cross Hospital; Charles Reuner, Würzburg and University College; and William J. Sheppard, St. Thomas Hospital and Newcastle-on-Tyne College of Medicine.

Of the 173 Candidates examined during the last and present week twenty-six failed to satisfy the Board of Examiners and were referred for three, and one Candidate for six months' further Anatomical and Physiological Study. The Primary and Pass Examination for the Fellowship of the College will take place on the 21st and 27th of May, respectively.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on April 8th:—

Kánga, Jamshedji Kharshedji, Bombay.
Pickering, Robert Whitworth, Park-road, Royton.
Usher, John Edward, Melbourne, Australia.

The following gentlemen on the same day passed the Primary Professional Examination:—

Thomas Wm. Buckley, St. Thomas's Hospital; William Cecil Penwick, Guy's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At the April examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Matilda Charlotte Chaplin Ayrton, Charles James Barry, Joseph Bradley, John Joseph Daly, James Davison, John Knox Denham, Anthony Kidd, Chas. George Drummond Mosse, Cornelius O'Brien, John Pollock, William James Swanson.

MIDWIFERY.—Matilda Charlotte Chaplin Ayrton, James Davison, Anthony Kidd, Edward Erskine Moore, Cornelius O'Brien, Oliver William Sproulle, William James Swanson.

On the 7th inst. the undermentioned were admitted to the Fellowship of the College:—

Isaac Ashe. | Christopher Joynt.

On the 12th March:—

Robert A. Hudson.

UNIVERSITY OF OXFORD, April 15th.—The degree of Doctor of Medicine was conferred on E. Jacobs, Corpus.

THE Hospital Saturday collections in Sheffield on the 10th inst. realised £747.

A BUST in bronze of J. Marion Sims, M.D., LL.D., has been presented to the Alumni Association by the surgical staff of the Jefferson College Hospital.

MR. G. ADAMS, the medical officer of the Nailsea district of the Bedminster Union, has been awarded a gratuity of £20, in recognition of extra services rendered by him during the fever epidemic in his district.

MERCER'S HOSPITAL, DUBLIN.—Some alterations, including a new operation theatre and accommodation for extern patients, are contemplated, and plans have been selected for those and other purposes, which it is estimated will cost over £4000. About £1500 has already been received or promised, and the governors trust that further aid will be obtained, so as to allow them to commence the work without delay. During the past year the receipts amounted to £2247, and the total expenditure to £3182, or a balance on the wrong side of £935.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Hospital for Sick Children, Great Ormond-street, received nearly £1900 in donations on its twenty-eighth anniversary last week. The Right Hon. Sir William Erle, P.C., formerly Chief Justice of the Court of Common Pleas, bequeathed £500 to the Royal Hants County Hospital at Winchester, £300 to the West Sussex, East Hants, and Chichester General Infirmary and Dispensary, and £300 to the London Fever Hospital. The Cumberland Infirmary, Carlisle, has received £100, less duty, under the will of Miss Thurnam. The North Eastern Hospital for Children, Hackney-road, has received £200, less duty, under the will of Mr. Samuel Yates, and £100 anonymously, per Mr. J. Lister Godlee. Mr. Johnston Jonas Foster, of Moor Park, Ludlow, bequeathed £250 each to the Bradford Infirmary and Dispensary, the Bradford Eye and Ear Hospital, the Bradford Fever Hospital, and the Halifax Infirmary. General Philip Spencer Stanhope, colonel of the 13th Regt., bequeathed £100 to the St. Marylebone General Dispensary. The Drapers' Company have given an additional fifty guineas to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor. The Rev. G. B. Paley bequeathed £50 to the Cottage Hospital, Millenhall. The Rev. J. Heyworth bequeathed £500 to the Bristol Royal Infirmary.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ADAMS, J. D., M.D., M.R.C.S.E., has been reappointed Medical Officer of Health for the Yeovil Rural Sanitary District.

ADOLPHUS, T. P., M.R.C.S.E., has been appointed Assistant Medical Officer at the Camberwell Infirmary and Workhouse, for three months, on probation.

BURMAN, C. C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Western District of Bedford Union; also Medical Officer to the Workhouse, vice J. Millar, M.D., resigned.

BUTTERS, J. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Whitchurch and South Lydford District of the Tavistock Union.

COYLE, Mr. D., has been appointed Analyst for the Southern Division of the County of Derby.

CROSSBY, J. P., L.R.C.P., L.F.P.S.G., has been appointed Medical Officer of the Sunderland Union Workhouse, at a salary of £250, with private practice.

FISHER, Mr., has been appointed Resident Accoucheur at the London Hospital, vice Davies, resigned.

FOTHERGILL, Mr. E., L.D.S., has been appointed Dental Surgeon to the Newcastle-upon-Tyne Infirmary.

HENDERSON, G., M.B., C.M., has been appointed one of the Medical Officer of the Coldstream and Eccles Dispensary, vice Brown, deceased.

MCCUAIG, D., M.D., L.R.C.S.Ed., has been appointed Consulting Physician to the North Riding Infirmary, Middlesborough-on-Tees.

MCGACHEN, F. W. D., L.F.P.S.G., L.M., has been appointed Medical Officer of the Hunslope District of the Newport Pagnell Union.

NORTHEY, G. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Milton Abbott District of the Tavistock Union.

ORTON, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Foleshill District and the Workhouse of the Foleshill Union.

PATTERSON, T., M.D., C.M., has been appointed Medical Officer for the Fourth District of the Oldham Union.

SMYTH, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Senior House-Surgeon to the Belfast Royal Hospital.

VOLCKMAN, Mr., has been appointed House-Physician at the London Hospital.

WOLFENDEN, Mr., M.B., has been appointed House-Physician at the London Hospital.

WRIGHT, W. H., M.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer for the Normanton District of the Shardlow Union.

Births, Marriages, and Deaths.

BIRTHS.

BULL.—On the 7th inst., at St. Oswald's House, Stony Stratford, the wife of William H. Bull, L.R.C.P.L., M.R.C.S.E., of a son.

LUCEY.—On the 14th inst., at Southampton, Hants, the wife of William C. Lucey, M.D., of a son.

MOSS.—On the 9th inst., at Chardville, Elphinstone-road, Southsea, the wife of Edward L. Moss, M.D., Staff-Surgeon H.M.S. *Atalanta*, of a son.

REID.—On the 11th inst., at Belgrave Villas, Stratford, E., the wife of Walter Reid, Staff-Surgeon H.M.S. *Wolverene*, of a son.

MARRIAGES.

FERNELL—PORTER.—On the 13th inst., at St. Mark's Church, Sheffield, by the Rev. T. Woollen Smith, M.A., Vicar of Calvertown, Notts, Henry George Tudor Fernell, M.A. Cantab., Solicitor, to Edith, elder daughter of the late John Taylor Porter, F.R.C.S., of Sheffield.

SANKEY—CARR.—On the 8th inst., at St. Oswald's Church, Stipton Oliffe, Gloucestershire, by the Rev. Douglas Powell Ware, B.A., Curate of St. Mary's Episcopal Church, Glasgow, assisted by the Rev. W. H. Stanton, M.A., R.D., J.P., Rector of Hasleton, Gloucestershire, W. Arthur C. O. Sankey, third son of W. H. O. Sankey, M.D., of Sandywell-park, Gloucestershire, to Annie S. Fox, eldest daughter of the Rev. John A. Carr, B.A., Rector of Shipton Oliffe, W. Shipton Sollars.

WILSON—STYRING.—On the 8th inst., at All Saints' Paddock, Huddersfield, by the Rev. Wm. Gordon, M.A., Vicar, assisted by the Rev. Canon Calvert, M.A., Vicar of Huddersfield, David Wilson, M.B., to Emma, eldest daughter of Thomas Styring, Esq.

DEATHS.

BIRCHENALL.—On the 22nd ult., at Park-street, Macclesfield, John Birchenall, M.R.C.S.E., L.S.A.L., aged 81.

BIRNIE.—On the 6th inst., at Don-street, Old Aberdeen, Sarah Augusta, widow of M. Birnie, Surgeon, of Aberdeen, aged 85.

JAGOE.—On the 5th inst., at the Royal Victoria Hospital, Netley, E. R. Jagoe, A.B., Surgeon, A.M.D.

MCCREA.—On the 2nd inst., at Templepatrick, co. Antrim (the result of an accident), Samuel McCrea, M.D.

MAITLAND.—On the 9th inst., at Devonshire-terrace, Elizabeth White, widow of John Maitland, M.D., Indian Medical Service, and second daughter of the late Lieutenant-Colonel Hobbs, Royal Engineers.

POTTLE.—On the 9th inst., at Bunhill-row, E.C., Edgar George Pottle, M.R.C.S.E., L.R.C.P., aged 40.

SHARPEY.—On the 11th inst., at Torrington-square, London, William Sharpey, M.D., LL.D., F.R.S., formerly Professor of Anatomy and Physiology in University College, aged 78.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

A Movable Atlas, showing the Mechanism of Hearing and of Mastication. By Dr. G. J. Witkowski.

G. BELL & SONS.

Rest and Pain. By John Hilton, F.R.S. Edited by W. H. A. Jacobson, B.A., M.B. Oxon.

DAVID BOGUE, London.

Physiological and Pathological Relations of the Voice and Speech. By Dr. J. S. Bristowe.

J. & A. CHURCHILL, London.

Potable Water. By Charles Ekin, F.C.S.
An Introduction to the Study of Chemistry. By A. P. Luff, F.I.C., F.C.S., &c.
Healthy Life and Healthy Dwellings. By Dr. G. Wilson.
Surgical Emergencies. By W. P. Swain, F.R.C.S.
The Journal of Mental Science for April.

DELAHAYE ET CIE., Paris.

Mémoires de Chirurgie. Par Dr. G. Nepveu.

H. K. LEWIS, London.

Metric Record of Prescription and of Medical Observation.
On the Bile, Jaundice, and Bilious Diseases. By Dr. J. Wickham Legg.

LINDSAY & BLAKISTON.

Transactions of the College of Physicians of Philadelphia.

LONGMANS, GREEN, & CO., London.

Notes on Physiology. By Henry Ashby, M.D. Second Edition.

MACMILLAN & CO., London.

Introductory to Science Primers. By Professor Huxley.

S. W. PARTRIDGE & CO.

Neville Hatherley. With Introduction by S. Eardley, B.A.

H. RENSHAW, London.

Diseases and Injuries of the Eye. By G. Lawson, F.R.C.S.

SMITH, ELDER, & CO., London.

Poems. By W. Frank Smith, M.B. Second Edition.

Birmingham Medical Review. (Cornish, Brothers.)—Quarterly Journal of Microscopical Science; British Journal of Dental Science. (Churchills.)—Introduzione allo studio della Medicina Legale. Per Dott. C. D. Foscani.—Westminster Review.—Congenital Malformation of the Knee. By J. F. Hartigan.—Elijer Goff's Manifesto.—Archives of Otology.—Report of the Norfolk Lunatic Asylum.—Report of the Birmingham General Hospital.—Archives of Medicine.—The Population Question. By Dr. C. R. Drysdale. (Standring.)—Treatment of Empyema by Resection of one or more Ribs. By W. Thomas, M.B. (Hall & English, Birmingham.)—The Independent Practitioner, Baltimore.)—The Weather of 1879, as observed in London. By E. Mawley, F.M.S. (Bemrose.)—Structure and Function of the Kidney. By Dr. A. W. Smyth. (New Orleans.)—The Therapeutic Gazette. (Davis, Detroit.)—Cumberland and Westmoreland Lunatic Asylum Report.—Report of Joint Lunatic Asylum at Abergavenny.—Journal de Médecine.—Cenni Statistici sul pio instituto di S. Spirito in Sassia dal 1870 al 1876.—A Sketch of the Life and Mission of St. Benedict.—The Popular Science Review. (D. Bogue.)—Maryland Medical Journal.—The Fallacies of Popular Clinical Medicine. By Dr. J. S. Wight. (Putnam, New York.)—Time.—Du Traitement Mécanique des Maladies de la Colonne Vertébrale. Par Dr. Oscar Jennings. (Paris: O. Berthier.)—Therapeutic Gazette. (Michigan: G. S. Davis.)—The Family Physician. Part III. The Magazine of Art. Part XXIV. (Cassell & Co.)—Social Notes. Part XXV.—Fraser's Magazine for April. (Longmans.)—Monthly Review of Dental Surgery. (Smith, Elder, & Co.)—De la Lésion des Organes Urinaires. Par Dr. G. Eustache. (Baillière et Fils.)—Fourth Annual Report of the Managers and Officers of the State Asylum for the Insane at Morristown, N.J.—Bollettino del Comitato Medico di Genova.—National Board of Health Bulletin, Washington. No. XXXVI.—Sur la Menstruation après l'Ovariotomie et l'Hystérectomie. Par Dr. L. Ormières. (Paris: Doin.)—On the Nomenclature and Classification of Diseases of the Skin; New Method of Permanently Removing Superfluous Hairs; Use of Water in the Treatment of Diseases of the Skin. By Dr. L. D. Bulkley. (Putnam, New York.)—Therapeutic Action of Mercury. By Dr. Clessenger. (Knight & Leonard, Chicago.)—Annual Report of the Salop and Montgomery Lunatic Asylum.—On the Treatment of Endometritis. By Dr. J. Hickinbotham. (Hall & English, Birmingham.)—The Churchman. (Eliot Stock.)—Archives of Ophthalmology; C. Heymann's Verlag, Berlin; Annals of the Anatomical and Surgical Society, Brooklyn. (Putnam, New York.)—Notes on the Anatomical Relations of Uterine Structures. By Dr. Buckler.—Journal des Sciences Médicales de Lille.—Ueber einen fall von Paracentesis Pericardii. Von C. Hindenlang.—Mitthellungen über die Pest-Epidemie im Winter 1878-1879 im russischen Gouvernement Astrachan.—Victoria Review.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 15th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
April 9	30·28	N.E.	46	42	62	50	40	0·03	Cloudy
„ 10	30·20	N.E.	43	40	56	48	38	..	Overcast
„ 11	30·09	N.E.	41	39	61	49	37	..	Cloudy
„ 12	29·89	E.	44	40	75	51	37	..	Cloudy
„ 13	29·89	E.	48	46	81	59	43	..	Overcast
„ 14	29·72	E.	47	46	..	50	45	0·12	Raining
„ 15	29·70	E.	45	44	..	47	41	0·85	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE USE OF THE FORCEPS.

DR. P. C. WILLIAMS, in a paper read before the Baltimore Academy of Medicine, and published in the *Maryland Medical Journal*, discusses in a full and able manner the subject of the use of the forceps in midwifery. In labours "tedious," not so much from the time occupied in the process as from the pain and exhaustion induced, he would use the forceps, taking care that the rigidity of the parts is first overcome. Also in cases of malposition or unusual size of the child, and in deformed pelvis, he would, as a rule, prefer the instrument to version, because resort to the latter expedient leads to the danger of prolapsed cord, with its accessory perils, and likewise exposes the mother to unnecessary risks. Dr. Williams concludes with a caution, which he thinks it wise to observe in every case where the forceps are applied at the "superior strait"—viz., "always insert the hand, or at least the extremities of the fingers, *into* the os uteri before you introduce the blades of the instrument. This affords an infallible guide, and is a great protection to the mother."

F.R.C.S.—There were four vacancies last July for election into the Council of the College of Surgeons. The unsuccessful candidates were Messrs. T. Bryant and R. Barwell; the former polled 97 votes, including 9 plumpers; and the latter 22, including 3 plumpers.

Dr. Buchanan, (Glasgow.)—The late arrival of the proof rendered it impossible to insert the addition. The request shall be complied with.

TREATMENT OF GONORRHŒAL OPHTHALMIA.

To the Editor of THE LANCET.

SIR,—I awaited this day's LANCET in order to see whether Dr. Charles Bell Taylor or anyone besides would challenge Mr. Critchett's claim to be the first to divide the eyelid in cases of gonorrhœal ophthalmia. In a communication which you published in THE LANCET, April, 1876, p. 560, Dr. Taylor concludes thus: "While on the subject of gonorrhœal ophthalmia, I may mention that I have found the greatest benefit, in some of these cases, from the very free division of the external canthus; this enables the surgeon to expose the eyeball, turn the lids inside out, incise chemosed conjunctivæ, and freely apply such local remedies as may be indicated. Spasm is also relieved, and the free bleeding occasioned is most beneficial."

Had Mr. Critchett consulted the "Medical Digest," section 1634-6, he would not have written: "I determined to adopt a somewhat heroic and novel proceeding, and one that has not, I believe, been published," and then describes division of the eyelid in the middle line, instead of at the external canthus, the latter plan being, I should fancy, preferable.

Yours obediently,

RICHD. NEALE, M.D. Lond.

Boundary-road, South Hampstead, April 9th, 1880.

BROMIDE OF ETHYL.

THIS drug, which seems to be obtaining some reputation, especially in America, where its use has been warmly advocated by Dr. Levis, forms the subject of an article in the New York *Medical Record* of the present month, by Dr. Marion Sims, who describes a case in which the hydrobromic ether was employed for the performance of Battey's operation. During the first twenty minutes about two ounces of the ether had been used; the patient then vomited, and again twenty minutes later, with severe straining. On three occasions during the operation there was considerable opisthotonos, with rigidity and twitchings of the extremities; her pulse, however, was strong and full. In all, four and a half or five ounces of the anæsthetic was used in the course of the operative proceedings, which lasted an hour and a half. The patient suffered from distressing retching and vomiting, with diarrhœa and headache, and died some twenty-one hours afterwards in severe convulsions. Dr. Sims inclines to the opinion that in this case death was caused, at least indirectly, by the ether, and utters a caution against its use in prolonged operations, and where there is kidney disease.

Inquirens.—Nothing can be done in the study without practice.

SMALL-POX HOSPITALS.

To the Editor of THE LANCET.

SIR,—Your issue of March 20th, containing an article on Dr. Bridges's Report to the Local Government Board on Small-pox Hospitals, has only just reached me. In that article you have clearly pointed out the possible fallacies of some of Dr. Bridges's conclusions and methods of reasoning, more especially in that part of his report which deals with their influence, for good or for evil, on the immediate neighbourhood surrounding them, as you say it has never been averred that these institutions produce evil results on the large districts or parishes in which they may be situate, but that they do, or that they may, produce evil results on the immediate locality surrounding has been maintained, and with some reason.

Until very recently, and for some years previously, I have resided in the vicinity of one of these institutions, the Fulham Hospital, and I speak with a considerable amount of personal knowledge of the locality surrounding it, and of the extent to which it has been affected by small-pox. Since the opening of the hospital the immediate neighbourhood surrounding it has never been free from the disease, except when the hospital itself has been empty or nearly so of patients. In the autumn of last year (1879) the medical officer of health for the Fulham district gave, in his Annual Report for 1878, a most ghastly description of the ravages of the disease up to that date. On analysing his report, it was found that the scenes there depicted occurred in the streets of his district contiguous to the hospital grounds. Since then the disease has continued, and I have now before me an extract from a local paper, dated March 20th, 1880, in which a report is made to the Fulham Board of Guardians with reference to the disease. It states that from three of the districts of the Fulham Union, during the previous month, 23 cases of small-pox had been removed, 22 of these cases having been sent from one district only, and from that part of the district next to the hospital—in fact, from one street in its immediate neighbourhood. This has been precisely the case with the Brompton district of the Kensington Union. A portion of it adjoins the hospital, and I am well acquainted with it, having been associated with its Poor-law medical officer during the late, or rather present, epidemic, as it still continues. Up to the autumn of 1879, 223 pauper cases were removed from the Brompton district to the Fulham Hospital. Of this number, 208 were removed from ten or twelve streets in the immediate neighbourhood of the hospital; the remaining 20 occurred in the more distant parts of the district in a scattered and sporadic form. It may be mentioned that the infected area formed about one-tenth of the area of the whole district, and about one-fiftieth of the whole of the parish of Kensington, in one street. In that side of it exposed directly to the hospital scarcely a house escaped infection. It will not, therefore, appear very surprising that many of the general public, and also many competent professional men, should be unable to believe that the hospital is entirely innocent in the matter. Those whose duty, however, it is to report officially on the subject think otherwise. So far as I have seen of their reports, they appear to make the mistake you refer to, treating the matter as one affecting a whole parish or large district, losing sight of the immediate neighbourhood of the hospital—a manifest fallacy in so far as it has reference to the locality directly surrounding the hospital and its influence thereon.

The reasons generally given for the long continuance of the epidemic are: insufficient vaccination and revaccination, concealment of cases, carelessness of washerwomen, the visitings of servant maids to infected districts and epidemic influence. All these, no doubt, have their action; but they are also equally applicable to those districts where the disease has not existed, or only so in a mild or sporadic form. It would seem as though some other cause or causes should be looked for.

It appears to me that the term epidemic influence as applied to this long-continued outbreak of small-pox—a disease, of all others, spread by contagion and infection—should be received with some modification; at any rate, of all the large towns in the United Kingdom until very recently, London alone has been subjected to it, and that for a period of now over three years.

t the risk of encroaching too much on your space, I would wish to make one remark on the observation of Dr. Bridges with reference to the conveyance of microscopical spores. He says that it is absurd to suppose that they can be conveyed through the atmosphere for an indefinite distance. This is true enough. Distance, however, is a relative term. Manifestly, however, the spores or contagium in the instance of small-pox must be carried some distance. As the majority of cases are infected by some unseen, and therefore distant, source, direct contact is by no means necessary. The question arises, What is the probable distance at which infection ceases? Is it the same in an infected house containing one patient, in an ambulance under the same conditions, as it is in a large hospital containing 150 severe cases of the disease, saturating the surrounding atmosphere with spores, or whatever form the poison may take? Are conditions of atmosphere, locality, elevation, &c., the same in the one case as the other, as regards the power of infecting at a distance? This is a question well worth inquiring into; and, as you say, it is incumbent on some one of the governing authorities to make it, seeing that in spite of the establishment of these hospitals the disease is now entering on its fourth year of scarcely uninterrupted progress in London.

I am, Sir, your obedient servant,

March 29th, 1880. SURGEON-MAJOR.

"NEWSPAPER NOTICES OF MEDICAL WORK."

WE called attention in THE LANCET of November 29th to two newspaper paragraphs in reference to ordinary surgical operations. One of these paragraphs was from the *Sydney Echo*, and described a lithotomy and an amputation by, respectively, Dr. M'Laurin and Dr. Cox. These gentlemen forward us the following letter from the Editor of the *Echo*, which completely exonerates them. We gladly insert the letter, but Drs. M'Laurin and Cox will agree with us that it is no part of a newspaper reporter's duty to describe the ordinary operations of surgery in an infirmary or out of it, and the sooner the practice is discontinued the better.

Echo Office, Sydney, January, 1880.

"DEAR SIR,—I see that a paragraph which appeared in the *Echo* with reference to medical work at the Sydney Infirmary has been copied into THE LANCET, apparently for the purpose of condemning unprofessional efforts to obtain notice through the press. I mark particularly the following sentence: 'We cannot so much blame lay newspapers for inserting such paragraphs as we blame medical men who contribute them for publication.' I regret that an unjust imputation should thus be cast upon you and Dr. Cox. One of the duties of the city reporter of the *Echo* is to visit the infirmary every day, and in the ordinary course of business he obtained the information contained in the paragraph referred to. There is not the slightest colour of truth in the innuendo conveyed in the sentence I have above quoted from THE LANCET. In conclusion, I would say that, in my long experience of newspaper life, I have not known any instance in which a Sydney medical man of recognised standing has attempted to obtain recognition by the press in the unprofessional manner censured by THE LANCET.

Yours very truly,

"Dr. M'Laurin." "SAMUEL COOK.

PUERPERAL CONVULSIONS.

DR. T. A. POPE, of Wilderville, Texas, writing on this subject, says:—"I feel justified in saying that if bloodletting be eschewed, chloroform inhalation as a temporary expedient, chloral and the acetate of potash be given freely, followed by free purgation, and a diuretic mixture when no contra-indication exists, very few patients will be lost from puerperal convulsions."

ENGLISH AND FOREIGN WEIGHTS AND MEASURES.

To the Editor of THE LANCET.

SIR,—Will you allow me to call attention to another victim to the difference between English and foreign weights and measures?

The Italian Consul in Bombay was prescribed an injection of morphia by an Italian doctor; but the chemist mistook *grains* (written "grana" in the prescription) for the French word *grammes!* and, of course, the unfortunate patient died in a very short time. As well as I remember, there are about *fifteen grains* in one *gramme*, so that the extent of the danger of mistaking one for the other can be estimated.

I have recently returned from a long stay in Italy, France, &c., and always found the *greatest difficulty* in making foreign chemists understand the difference; and if I had not known the French language fairly, I should probably have been sacrificed to one of the many English prescriptions I got made up.

I leave the matter in the hands of the medical profession, respectfully suggesting an International Conference to assimilate the weights and measures of all civilised countries.

I remain, Sir, your obedient servant,

April 10th, 1880. NEMO.

P.S.—"Gr." expresses equally *grains* and *grammes*, which is really too *monstrous*, considering the difference between the two!

F.R.C.S., (Manchester.)—At the primary examination for the Membership of the College of Surgeons, which was brought to a close on Wednesday last, 173 candidates had been examined, against 213 in the corresponding period last year, when the rejections amounted to 45 for three months, and 7 for six months.

W. J. H. should at once secure the aid of a skilful general practitioner or surgeon. There are, happily, as yet no special institutions for such diseases.

INFLUENCE OF THE ELECTRIC LIGHT ON VEGETATION.

MR. C. W. SIEMENS has made some further observations on the influence of the electric light on vegetation. In another communication to the Royal Society he detailed a few of the results obtained. He exhibited two pots of strawberries which had been grown in the usual way until the fruit buds appeared, when one of the pots was exposed to continuous light—that is, daylight through the day and electric light during the night, the other being left to the influence of ordinary daylight. The contrast between the two pots, as shown at the meeting, was remarkable: one bore a cluster of large, red, fragrant strawberries; the other a bunch still green, with the exception of one slightly red spot. The ripe fruit was the result of the combined light, from which the conclusion is drawn that electric light may be found useful in the ripening of fruit generally. The ripe strawberries were tasted by the President, and pronounced very good.

A Fellow, (Liverpool.)—There is plenty of time, as the election does not take place until the first Thursday in July, when at least three vacancies will be declared in the Council, caused by the death of Mr Hancock, and the retirement in the prescribed order of Mr. George Busk and Mr. T. B. Curling, both of whom are Fellows of the Royal Society. Sir James Paget, Bart., will take the Chair at the Fellows' festival.

THE PHYSIOLOGY OF THE LARYNX.

To the Editor of THE LANCET.

SIR,—Permit me to reply to Mr. Holmes's letter of December 6th last year. Had I been at home I would have done so earlier.

In my original paper, which appeared in your columns on June 21st, 1879, I not only began by stating it as my firm belief that there is no longitudinal stretching of the vocal cords by muscular action during vocalisation, but concluded that to admit a longitudinal tension by the action of the crico-thyroid muscles was to admit an anomaly in the phenomena of muscular action, in the shape of an increase of the length of a muscle during its contraction. Mr. Holmes in his first letter (June 28th) ventures to admit I am right in reference to this matter, but adds that "the experiments of Müller are sufficient to prove that alterations in the pitch of the voice, at least in the chest notes, are entirely dependent on varied tension of the vocal cords." Mr. Holmes is now "sorry" that I am "able to strain such an absolute agreement" with any of my "theories" out of anything he has written. After remarking that it is not with any theory of mine I have claimed his agreement with me in every letter I have written, but with an argument based upon anatomical and physiological facts, I would ask why Mr. Holmes did not accuse me of straining an agreement after my letter of July 12th, in which I express astonishment that, after agreeing with me so far, he should still have faith in the experiments of Müller. I now learn that the approval is a qualified one. The peculiarity of the particularly intricate and lengthy qualification, however, is that it more than negatives the approval. Mr. Holmes believes in a longitudinal tension of the vocal cords. I most emphatically do not. The process of reasoning by which I try to show why I do not, Mr. Holmes has not as yet ventured to attack. He contents himself with styling it an idea and a theory. I must, therefore, again point out that if I argue correctly that the crico-thyroid muscles do not stretch or make tense the vocal cords in a longitudinal direction, all experiments yet made upon the dead larynx have no value whatever, because they are not faithful imitations of nature; and also that Mr. Holmes is not at liberty to appeal to them for the purpose of qualifying a very positive approval of an argument which avowedly aims at demonstrating their absurdity.

My remarks about the falsetto voice in my last letter sprang from no misconception or want of care in reading Mr. Holmes's letter. I added that "a pure falsetto note has never been emitted by any method of experimentation yet devised," in order to show that if the vocal cords were the all-important structures they are made out to be, some method would have been discovered by this time to get a falsetto note out of them.

In conclusion, I have to invite Mr. Holmes to consider my argument on the action of the laryngeal muscles in THE LANCET of June 21st, 1879.

I am, Sir, yours faithfully,

Kendal, April 7th, 1880. C. R. ILLINGWORTH, M.B.

SUBCUTANEOUS INJECTIONS.

MR. W. J. MARSH, of St. Matthew's Infirmary, Cambridge Heath, offers the following remarks on the above subject:—

None of the preparations at present obtainable are free from objection. The permanent solutions are apt to leak or spill, and the gelatine discs are troublesome, whilst their advantage as regards exact dosage is more apparent than real. What is required are solutions that could be alternately and easily solidified and liquefied. Might not these be obtained by using a certain proportion of gelatine sufficient to enable the solutions to set firmly at ordinary temperatures, but not so much as to prevent them being easily liquefied by heat? A small quantity of salicylic acid or chloral might be added if necessary as a preservative.

An Old Surgeon-Major.—The publication of the General Order regulating the administrative branch of the Indian Civil Service obviates the necessity for the publication of our correspondent's very temperate remonstrance.

A CASE OF DIABETES MELLITUS TREATED WITH SALICYLATE OF SODA.

DR. CHARLES KAUFMANN, of Frankfort-on-the-Main, communicates the following interesting case:—

A lady, aged fifty-eight, consulted me for intense pain she suffered during micturition, and which increased, especially after having passed urine. She had been under the care of another medical man during one year and a half, who told her that her disease was a chronic catarrh of the bladder, and who applied, besides other medicines, injections of chamomile infusion into the bladder, without any amelioration. On examination, I found the mucous membrane of the vagina much excoriated in places, and extremely sensitive. It being evident that the passage of the urine over these excoriations was the cause of the pain, and that the bladder was free from disease, further examination eliciting the well-known symptoms of diabetes, except the hunger; the diagnosis was not difficult, even before the analysis of the urine, which was of a specific gravity of 1038, with five per cent. of sugar. First of all I regulated most carefully the diet, and ordered Carlsbad water to be taken at home, as the patient could not undertake a journey to the spa. The water having been regularly used during a fortnight, the analysis of the urine showed no change at all for the better. I then ordered salicylate of soda in doses of one gramme to be taken three times a day after each meal. After a fortnight the specific gravity had diminished to 1016, and the sugar to two per cent. The medication having been continued for ten days longer, the sugar had quite disappeared, and the specific gravity was 1012.

I. V. R. C.—The minute on the Indian Medical Service by Lord Dalhousie, written in 1856, was subsequently published in this country, and will be found in the Appendix to the Report of Lord Herbert's Commission. It is interesting and valuable; but we do not think it necessary to reprint a portion of it, as suggested by our correspondent.

ARSENIC IN SKIN DISEASES.

To the Editor of THE LANCET.

SIR,—In last week's LANCET you have generously reported an abstract of a paper I read on the above subject before the Medical Society of London. An error has arisen in the report, how I cannot understand, as the abstract as I wrote it is correctly entered on the minutes of the Society. Your report says, "It is sometimes useful to combine it with other drugs, even iron." It ought to read, "It should never be combined with any other drug, not even iron."

I am sorry to trouble you with an explanation on a point that at first sight seems trivial; but the whole object of my paper was to show that, in order to obtain the full therapeutical value of arsenic in diseases of the skin, it should be given alone.

I am, Sir, your obedient servant,

Montagu-square, April 12th, 1880. MALCOLM MORRIS.

A Collector.—The large collection of medical portraits made by Mr. W. Wadd was dispersed; the late Dr. Squibb, Dr. Merriman, the College of Surgeons, and Mr. Stone obtained by purchase most of them. Mr. Squibb's collection is now in the possession of the Royal Medical and Chirurgical Society.

Mr. Harry Dove should address his question to a practitioner; or, if thought desirable, to one of the Professors of Obstetrics, whose names may be easily found in the Medical Directory.

NICTITATION.

To the Editor of THE LANCET.

SIR,—I have three patients, one gentleman and two ladies, all suffering in the same way—viz., a shaking of one eyelid, like a frequent and rapidly repeated wink, and a little occasional twitching at the same side of the face, extending to the angle of the mouth. One lady has good private means, so, having proved my inability to benefit her, I recommended her to consult some physicians of highest repute in London, Dublin, and elsewhere. No advantage has resulted.

Perhaps some kind reader of your valuable journal could recommend, as the result of successful experience, some treatment. He would have my sincere thanks, and my patients shall be duly informed by me of their benefactor.

Yours faithfully,

April 7th, 1880. M.D.

R. V.—Our correspondent will probably have seen ere this the announcement that a mess has been established for the medical officers at Aldershot.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—Will you permit me to correct an error in your report of my remarks at the last meeting of the Pathological Society? I did not say that branched connective-tissue corpuscles occurred in "mucous membrane," but in mucous *tissue*, of which the vitreous humour, the fœtal umbilical cord, myxomata, &c., are examples. I should not have troubled you with this correction were it not that your report represents me to have said not only that which I did not say, but that which is almost certainly erroneous.

I am, Sir, your obedient servant,

Upper Berkeley-street, W., April 9th, 1880. JOHN CAVAFY.

M.B. Edin. — Druitt's Surgeon's Vade-Mecum, Longmore on Gunshot Injuries, Parkes's Practical Hygiene, Aitken's Outlines of Practice of Medicine, and Lowne's Aids to Physiology, would probably answer the purpose of our correspondent.

A. B. B.—Write to the Secretary of the Local Government Board, Whitehall.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer; Mr. C. Mazzoni, London; Messrs. Boyle and Son, London; Dr. Neale, London; Mr. Hubbard, London; Mr. Illingworth, Kendal; Dr. Cavafy, London; Mr. Max Gregor; Mr. Palmer, Coldstream; Dr. Wahltuch, Manchester; Dr. Thin, London; Messrs. Dunn and Hewett, London; Mr. H. Millington, Bromsgrove; Mr. Berry, Wigan; Mr. S. Gamgee, Birmingham; Dr. Warren, Boston, U.S.A.; Mr. M'Laurin, Islington; Dr. Ward, Cockermouth; Mr. Wright, Leeds; Surgeon-Major Curran; Mr. Wyndham Cottle, London; Mr. Hughes, Halstead; Mr. Little, Ben Rhydden; Dr. Skerritt, Bristol; Messrs. Macmillan and Co., Cambridge; Dr. Watt; Mr. Dearden, Church; Mr. Hynes, Nottingham; Mr. W. M. Allen, Boston, U.S.A.; Rev. T. J. Berwick, Buntingford; Dr. Buzzard, London; Dr. Barton, Fulbeck; Mr. Macpherson, Middlesborough; Mr. R. C. Lucas, London; Dr. Buchanan, Glasgow; Dr. Bowditch, Boston, U.S.A.; Mr. Malcolm Morris, London; Dr. S. Mackenzie, London; Mr. Bridger, Canning Town; Mr. S. Murphy, London; Mr. Gray, London; Messrs. Tulloch and Son; Dr. Bolleau; Mr. Snell, Sheffield; Dr. Thudichum, London; Dr. Savage, Birmingham; Mr. Childs, London; Mr. Sumner, Boston, U.S.A.; Mr. Keane, Otterhead; Mr. Lockwood, Sheffield; Messrs. Smith and Son, Birmingham; Messrs. Richardson and Co., Leicester; Mr. Williams, Liverpool; Mr. Hemming, Cheltenham; Mr. Whiffen, Battersea; Messrs. Grahames and Co.; Mr. Elliott, Newcastle; Mr. Marshall, Cheetham; Dr. Stuart, Dowlais; Dr. Skrimshire, Holt; Messrs. Harrison and Sons, London; Mr. Scott, Manchester; Mr. Cosburn, Newbury; Mr. Frampton, Weston-super-Mare; Mr. T. Hunt; Mr. Pountney, Lytham; Mr. Allsop; Mr. H. Dove; Dr. L. Gogal, Murraysburg; Mr. J. C. Richardson; C. Holloway; R. S.; M.D., Derby; Dean, Golcar; Filmer; M.D., Woolwich; W. J. H.; Nemo, Newport, I.W.; M.D.; Medicus, Hackney; Unknown; The Editor of the *Gardeners' Magazine*; Ruination, India; Pyrexia; Inquirens; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Grace, St. Andrews; Mr. Keyworth, Lincoln; Mr. Bainbridge, Chiltercontes; Mr. Coates, Sirhowey; Dr. Harding, Whittlesea; Dr. Foote, Rotherham; Dr. Farmer, Bridgwater; Mr. Edwards, Furneaux Pelham; Mr. Bull, Stony Stratford; Messrs. Beal and Co., Brighton; Mrs. Cookson, Cambridge; Mr. Day, Dorchester; Mr. Muscroft, Pontefract; Mr. Baron, Ulsby; Mr. Porter, Sheffield; Dr. Gill, Stratford-on-Avon; Mr. Hubbard, Downham Market; Mr. Davies, Ebbw Vale; Mr. Wilson, Ryde; Dr. Kennedy, Dublin; Mr. Bullivant, Derby; Mr. Andrews, Shrewsbury; Mr. Appleton, Beverley; Mr. MacGill, Littleborough; Dr. Sheehy, Ebbw Vale; Mr. Hall, Aberystwith; Dr. White, Bradford; Dr. Walker, Hackney; Mr. Moore, Moreton-in-Marsh; Dr. P. M. Chapman; Mr. Bolton, Carlow; Messrs. Macmillan and Co., Cambridge; Mr. Hemming, Cheltenham; Mr. Bartlett, Malton; Dr. Lucey, Southampton; Mr. Evans, Bromsgrove; Mr. Bate, Huddersfield; Medicus, Carlton; D. C. S.; Alpha, Darlaston; Boyatt; M. E. K., Oakham; Y. Z., Forest-gate; A. B., Stoke Newington; Medicus, Newport; M. B.; C. W. H.; R., Barrow-in-Furness; Dr. X., Huddersfield; M.R.C.S., Grantham; W. S., Stockwell; R. G., Carnarvon; Medicus, Glasgow; M. N. O., Barnard Castle; C. B.; M.D., Bow; Alpha, Swansea; L. M. G.; Verax 50; A. B., Bethnal-green; E. Q.; W., Wigan; Alpha, Kennington; B. F.; &c.

La Médecine des Ferments, Manchester Guardian, Welshman, Liverpool Daily Post, Hastings and St. Leonards Times, East London Observer, Metropolitan, Pharmaceutical Journal, National Board of Health Bulletin, Bristol Mercury, Surrey Advertiser, El Observador Medico, Medical Record, Philadelphia Medical Times, Sunderland Daily Post, La Independencia Médica, Englishman, Australian Medical Journal, Leeds Mercury, Western Morning News, &c. &c., have been received.

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-office letters addressed to initials only.

Agent for the Advertising Department in France—
M. BERTHIER, 104, Boulevard St. Germain, Paris.

Medical Diary for the ensuing Week.

Monday, April 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. William Adams will show casts of Contracted Fingers. — Sir Joseph Fayrer, "On Hepatic Abscess."

Tuesday, April 20.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. R. H. Scott, "On Wind and Weather."
STATISTICAL SOCIETY.—7½ P.M. Dr. F. J. Mouat, "On the Education and Training of the Children of the Poor."
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Multiple Ivory-patch Morphœa in process of rapid recovery (living specimen); Skin Disease, probably Lichen Ruber (living specimen); Ramifying Cyst in the Brain; Aneurism by Anastomosis of the Ear; Laryngeal Perichondritis in Typhoid Fever and in Small-pox; Elongation of Limb in connexion with Knee-joint Disease (living specimen); Aortic, Mitral, and Tricuspid Constriction; Tumour of Spermatic Cord; Imperforate Anus; Volvulus in an Infant; Complete Necrosis of the Lower Jaw, with Cancrum Oris; Diffuse Sarcoma of Liver in an Infant aged three weeks; Ossifying Chondro-sarcoma of Left Femur, with Secondary Growths; Congenital Talipes Varus; Talipes Calcaneus; &c. &c.

Wednesday, April 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council Meeting. — 8½ P.M. Mr. Christopher Heath: "Thirty-five Years' History of a Maxillary Tumour."
HUNTERIAN SOCIETY.—8 P.M. Mr. Startin will show a Case of Acute Pemphigus.—Mr. J. E. Adams, "On a Case of Cancer of the Rectum, in which Excision and Colotomy were performed"; and a "Case of Osteotomy of the Femur for Genu Valgum."

Thursday, April 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Light as a Mode of Motion: Theories of Light and Colours."

Friday, April 23.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — 8 P.M. Evening Meeting. — 9 P.M. Mr. W. H. Pollock, "On Dumas Père."
QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Mr. J. G. Waller, "On an undescribed British Sponge of the genus Raphiodesma."—Mr. A. Martinelli, "On the Mechanism of the Stomata of the Holly."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Dr. Stokes, of Dublin, "On Amputating through the Hip-joint."—Dr. Southey, "On a Case of Acute Rheumatism with Multiple Embolisms."—Mr. Cripps, "On a Case of Secondary Hæmorrhage from the Stump of the Thigh, with Calcareous Degeneration of the Vessels."—Dr. Grailly Hewitt, "On a Case of Acute Hysterical Vomiting of ten months' duration, caused by Displacement of the Uterus."

Saturday, April 24.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. James Sully, "On Art and Vision."

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